# Forest Life

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# What the Association Is Working For

DEQUATE FOREST FIRE PROTECTION by federal, state, and other agencies, individually and in cooperation; the REFORESTATION OF DENUDED LANDS, chiefly valuable for timber production or the protection of stream-flow; more extensive PLANTING OF TREES by individuals, companies, municipalities, states, and the federal government; the ELIMINATION OF WASTE in the manufacture and consumption of lumber and forest products; the advancement of SOUND REMEDIAL FOREST LEGISLATION.

The ESTABLISHMENT OF NATIONAL AND STATE FORESTS where local and national interests show them to be desirable; the CONSERVATIVE MANAGEMENT OF PUBLIC AND PRIVATE FORESTS so that they may best serve the permanent needs of our citizens; the development of COMMUNITY FORESTS.

FOREST RECREATION as a growing need in the social development of the nation; the PROTECTION OF FISH AND GAME and other forms of wild life, under sound game laws; the ESTABLISHMENT OF FEDERAL AND STATE GAME PRESERVES and public shooting grounds; STATE AND NATIONAL PARKS and monuments where needed, to protect and perpetuate forest areas and objects of outstanding value; the conservation of America's WILD FLORA and FAUNA.

The EDUCATION OF THE PUBLIC, especially school children, in respect to our forests and our forest needs; a more aggressive policy of RESEARCH AND EDUCATIONAL EXTENSION in the science of forest production, management, and utilization, by the nation, individual states, and agricultural colleges; reforms in present methods of FOREST TAXATION, to the end that timber may be fairly taxed and the growing of timber crops increased.

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#### = CONTENTS = THE COVER-"Autumn Woods" Photograph by JOHN KABLE By WILL C. BARNES ..... 640 HOW THE NATIONAL FORESTS WERE WON THE REALIZATION OF A DREAM MICHIGAN'S GAME DOG By H. M. WIGHT..... FIVE MILLION WALNUT TREES FORESTRY IN FARM RELIEF THE CHINESE ELM AT HOME THE HUMAN FLY HYDE URGES ORGANIZED FORESTRY FOR ARKANSAS...... 658 AROUND THE STATES 662 A WOMAN POINTS THE WAY ASK THE FORESTER..... 675



## Denali-Alaska's National Park

So long as rock shall hold on high Denali's splendor in the sky, So long as earth and man endure, Here will the wild game roam secure.

In summer time against the blue Its dome reflects the sunset's hue. In winter raging blizzards lash And avalanches hiss and crash. The grizzly bear and mountain sheep Can wander, feed and calmly sleep. The great-horned moose and caribou Are safe in wood and marsh below.

His was the noble thought and plan To guard the game from ruthless man. So let his name remembered be By all who love the wild and free.

This poem was written in Scotland, by Dennis D. Lyell, and dedicated to Charles Sheldon—sportsman, hunter, naturalist—known as the father of Mount McKinley National Park.

## How the National Forests Were Won

By GIFFORD PINCHOT



OR so great an enterprise, the National Forests had a singularly obscure beginning. Although destined to grow into one of the most important of all conservation achievements, they did not come into being as the result of a great and studied act of legislation, such as Colbert's forest code in France in the Seventeenth Century. On the contrary, they owe their being to a brief and unimpressive "rider"

attached to an Act of Congress that was never intended to create a system of National Forests.

Near the feverish close of the short session of Congress in March, 1891, a conference committee was wrestling with a general bill to revise the land laws. Someone persuaded the committee to add a "rider" giving the President authority to set aside Forest Reserves from the public timberlands. Congress, in its haste to put through a bill that it rightfully regarded as important, either did not note the rider or failed to grasp its meaning. And so the rider passed with the bill—surely one of the most striking cases in legislative history of throwing out the baby with the bath.

If Congress had had its eyes open, it wouldn't have passed that rider—then. For Congress was still very much under the sway of the ruling tradition of getting rid of the Public Domain as rapidly as possible by passing it into private ownership. In that age of plentiful land, every American felt himself entitled to a homestead. Federally owned and managed forests would probably have struck Congress as an invasion of individual rights and Western liberty, if not a downright fantastic experiment.

In passing the rider, Congress builded more wisely than it knew. For the homesteading plan, which worked well for farm land, broke down completely when applied to timberlands. Under the notorious "Free Timber" and "Timber and Stone" acts, scores of millions of acres of timber passed into private hands, often by astounding frauds and to the



The winning of the National Forests will go down in history as the greatest bloodless battle ever won by the American people. Beginning with an unimpressive "rider" attached to an Act of Congress, the movement passed quickly into an era of feverish and dramatic conflict, and emerged victorious to form the basis of our present great system of National Forests.

In the thick of the fight almost from the beginning was Gifford Pinchot, who became the first Chief Forester of the United States. In recounting those stirring days that marked the transition of certain timberlands from the Public Domain to the National Forests he brings out many interesting and heretofore little-known facts.

To The American Forestry Association goes the honor of paving the way for our present system of National Forests, which embrace more than 160,000,000 acres, says Mr. Pinchot. Throughout the early '80's and '90's the Association urged and worked for the reservation of public timberlands.

In 1896, says Mr. Pinchot, The American Forestry Association asked the Secretary of the Interior to invite the National Academy of Science to propose a "rational forest policy," for the public forests. As a result of this proposal the Secretary of the Interior recommended the creation of thirteen forest reserves totaling 21,000,000 acres, and President Cleveland, who, like Roosevelt, was "blooded to the open and the sky," chose Washington's birthday, February 22, 1897, for the date of proclamation, as a worthy day for an Act so great.—Editor.

irreparable damage of the forests and of the public interest. When the 1891 rider went into effect, many of the best forests were already lost to the public, though fortunately there still remained a great forest heritage from which to carve the National Forests.

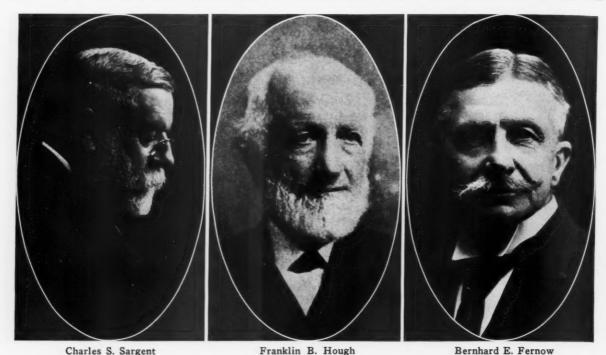
The history of the timberland frauds can not be told here. They were Gargantuan in magnitude and sometimes also in humor. Entrymen were

shipped in at so much a head and their claims taken over as soon as perfected, by the timber thieves. Eastern city directories were ransacked for names of fictitious claimants. To satisfy some oddly persistent remnant of conscience, toy houses were carried about, so that the claimant could swear he had a house on his claim.

Many energetic western lumbermen who did not want to be bothered with land were busily engaged in stealing the public timber. Sawmills were razing whole forests in the Lake States, the Rocky Mountains, the Pacific States.

During most of that period, the government winked at land frauds and timber stealing, or at best made half-hearted attempts to enforce the law with a mere handful of agents, often themselves incompetent or corrupt. Congress remained singularly obtuse, in spite of warnings by men like Secretaries of the Interior Schurz and Lamar. But there was a certain amount of public opinion against forest destruction. Through the '80's, newspapers and magazines carried protests against it. And if Congress was not ready for so drastic a move as reserving the public timberlands in perpetual public ownership, the idea already had back of it a fair amount of intelligent support.

Among those who first advocated the National Forest idea was Carl Schurz, German by birth, patriotic Union soldier and liberal American statesman by adoption. As Secretary of the Interior, he tried as early as 1878 to get legislation for creating timber reserves. In 1879 he made a special effort to



Nationally distinguished in their several fields, Hough and Fernow pioneered the forestry work of the Department of Agriculture and Sargent helped shape the National Forest administrative system.

have the California redwoods reserved; but he failed, and those noblest of all forests started on the way they are still traveling, to oblivion by the ax.

Schurz's enthusiasm for creating a system of National Forests—looked on by most people as chimerical—encouraged others to take up the idea. Among those who gave it support were Franklin B. Hough, who had the distinction of being the first forest expert employed by the Department of Agriculture; Secretary of the Interior Lamar; Commissioner Sparks of the Land Office, and Bernhard E. Fernow, who became Chief of the Division of Forestry in the Department of Agriculture in 1886. For several years in the '80's and '90's he was also President of The American Forestry Association, and as such undoubtedly played an important part in the recommendations made by the Association for reserving the public timberlands in 1889 and 1890.

Whoever may have been the real author and inspirer of the "rider" of 1891, it marked a new epoch in our land history. It was besides our first significant step in conservation—and down to this day it remains one of the greatest.

To President Harrison belongs the honor of creating the first "reserves"—the Yellowstone Park Timberland Reserve and the White River Plateau Timberland Reserve. Arnold Hague of the United States Geological Survey had the distinction of selecting and recommending the Yellowstone Reserve. President Harrison all told set aside 13,000,000 acres.

As soon as the first Reserves were established, the friends of the new forest policy were faced with a new and knotty problem—that of working out a system of administration. In the absence of protection, administration, and above all some system for opening their resources to legitimate public use under proper regulation, the Reserves were bound to incur strong opposition. Merely to "lock up" the forest resources, with no provision for their use, was to invite disaster. In fact, the West was inclined to resent any interference with taking what its people wanted.

By 1896 the supporters of the Reserves were ready to take the next important step. The American Forestry Association that year asked the Secretary of the Interior to invite the National Academy of Sciences to propose a "rational forest policy" for the public timberlands.

My first official connection with the National Forest enterprise dated from that time, for I had the honor of being a member and Secretary of the National Forest Committee drafted by the Academy for that task. Charles S. Sargent, eminent dendrologist of Harvard, was chairman. The Committee spent several months traveling in the West, visited most of the existing Reserves and above all looked for additional forests to be reserved. Afoot or by pack train some of us got far into the real wilderness.

On its return the Commission, through the Secretary of the Interior, recommended the creation of thirteen new Reserves totaling 21,000,000 acres. President Cleveland received the proposal enthusiastically and chose Washington's birthday, February 22, 1897, for the date of proclamation, as a worthy day for an act of great national significance. He did not over-estimate the significance of his act but he did over-estimate the public acclaim with which it would be greeted. There were, in fact, few huzzahs and a great many growls.

Cleveland's enthusiasm for the Reserve idea was not perfunctory or superficial. He was a conservationist at heart and deserves the grateful remembrance of all conservationists. And it is no mere coincident that the two Presidents who did most for the National Forests—Cleveland and Roosevelt—were both outdoor men, "blooded to the open and the sky."

Another task of the National Academy committee, besides scouting out new Forest Reserves, was to suggest a plan of administration. There had been some public agitation to have the Army take charge of the Forest Reserves. This demand was made partly because the Army had seemingly little to do, now that the Indian wars were over, and partly because the public distrusted civilian administration in those days of the spoils system and governmental inefficiency.

Sargent himself had strong leanings toward military administration. I was opposed to turning the Reserves over to

the Army, knowing that it was not entirely suited for carrying on an enterprise that would more and more demand technical skill in forestry. Therefore, I submitted a minority report against admin-Army istration of the Reserves.

Fortunately the Committee was not unanimously in favor of permanent military control and so the majority report proposed temporary Army control until a Bureau of Forests could be established by Con-

gress in the Department of the Interior. Congress did not accept the detailed plan of administration proposed by the National Academy of Sciences, but its work had nevertheless an influence in bringing the question to issue. In the enactment of the law of June 4, 1897, which has been called the Magna Charta of National Forest Administration, Charles D. Walcott of the Geological Survey was the leading spirit. Walcott should always be remembered as one of the early friends of a sound National Forest policy.

Instead of setting up a detailed plan, the act of June 4 gave to the Secretary of the Interior sweeping powers over the Forest Reserves, notably the power to "make such rules and regulations and establish such service as will insure the objects of such reservations, namely, to regulate their occupancy and use and to preserve the forests thereon from destruction." It also gave him authority to sell timber. The Secretary turned the gigantic task of administration over to the General Land Office, which unfortunately had neither money nor trained personnel to meet the responsibility. On the very day the Interior Department began its administration of the Forest Reserves, I was appointed to succeed Fernow as Chief of the Division of Forestry in the Department of Agriculture. I had gone several years before to study forestry at Nancy, in France, and in Germany, Austria, and Switzerland. At that time, the forest work of the Department of Agriculture was almost exclusively informational. The Division had no responsibility for the Forest Reserves, an anomalous situation that Theodore Roosevelt accurately de-

scribed years later in his autobiography:

"When I became President, the Bureau of Forestry (since 1905 the United States Forest Service) was a small but growing organization, under Gif-Pinchot, ford occupied mainly with laying the foundation of American forestry by scientific study of the forests, and with the promotion of forestry on private lands. It contained all the trained foresters in the government service. but had charge of no timber-

Grover Cleveland Theodore Roosevelt
Our "Conservation Presidents"—both outdoor men,—"blooded to the open
and the sky"—they did most of all for the National Forests.

lands whatsover. The government Forest Reserves of that day were in the care of a Division in the General Land Office, under the management of clerks wholly without knowledge of forestry, few if any of whom had ever seen a foot of the timberland for which they were responsible. Thus the Reserves were neither well protected nor well used. There were no foresters among the men who had charge of the National Forests, and no government forests in charge of the government foresters."

I went so far as to believe that the very continuance of the National Forests hinged on getting them into the hands of trained foresters and into the Department of Agriculture. Today I believe just as firmly that the one right place for National Forest Administration is in the Department of Agriculture. I labored incessantly from 1898 to 1905 to bring about their transfer. I could have had charge of the Forest Reserves in the Interior Department, but I refused, because I regarded as paramount the all-important question of permanent security for the public forests.

My reasons for seeking to transfer the forests to the Department of Agriculture went far deeper than the question of technical competence, important as that was and is. The National Forest idea ran counter to the whole tradition of the Interior Department. Bred into its marrow, bone and fiber was the idea of disposing of the public lands to private owners. There were exceptions like Schurz and Lamar, but for the majority of the officers and personnel of the Department, land disposal has been and still is the ruling passion.

In a speech at Boise, Idaho, the present Secretary of the Interior has proposed to cede the Public Domain grazing lands to the states and has even suggested the ultimate possibility of turning the National Forests over to the states also, which, without question, would mean their dismemberment and dissipation. The Department of the Interior never has been and never will be a real Department of Conservation. It has been the government real estate agent, bent always on getting the public lands into private ownership.

In President Roosevelt, there was an immediate and sympathetic grasp of the need to transfer the Forest Reserves to the Department of Agriculture, and the will and the power to effect it. In his very first message to Congress, he recommended the transfer, but it was more than three years before Congress would authorize it. Roosevelt's message to Congress in December, 1904, is a strong presentation of some of the chief reasons for the change. These reasons are just as sound today as they were then, and for that reason I am quoting them in part:

"All the forest work of the government should be concentrated in the Department of Agriculture, where the larger part of that work is already done, where practically all the trained foresters of the government are employed, where chiefly in Washington there is comprehensive first-hand knowledge of the problems of the reserves acquired on the ground, where all problems relating to growth from the soil are already gathered, and where all the sciences auxiliary to forestry are at hand for prompt and effective cooperation. \* \* It is true, also, that the Forest Services of nearly all the great nations of the world are under the respective departments of agriculture, while in but two of the smaller nations and in one colony are they under the department of the interior. This is the result of long and varied experience and it agrees fully with the requirements of good administration in our own case.

"Every administrative officer concerned is convinced of the necessity for the proposed consolidation of forest work in the Department of Agriculture, and I myself have urged it more than once in former messages. \* \* \* The interests of the Nation at large and of the West in particular have suffered greatly because of the delay."

Roosevelt's proposal was strongly seconded by the American Forest Congress, which met in Washington early in 1905, under the auspices of The American Forestry Associa-

tion, and which undoubtedly had a strong influence in bringing about the transfer. Congress speedily acted, and on February 1, 1905, the Forest Reserves—soon to be known as the National Forests—were transferred to the Bureau of Forestry (rechristened the Forest Service), of the Department of Agriculture.

I cannot here relate the colorful and dramatic events of the next five years of Forest Service history. As Chief of the Forest Service, I knew that the security of the National Forests depended both on winning strong public support and on permanently safeguarding the forest resources. The guiding principle was to open the forests to regulated use so as to bring about the greatest good to the greatest number in the long run, and at the same time keep the forests perpetually productive.

This principle, which seems simple enough on paper, was not so easy to execute. We had to open up National Forest timber to a system of sales that would promote private industry, meet local needs, and at the same time fully protect the public interest both in a fair return and in assuring forest renewal. We had to bring the grazing ranges under regulated use so as to prevent overgrazing and at the same time to protect the little man against the aggression of the big. We proclaimed the principle that it is better to help struggling settlers to support their families and make a decent living than to help a few rich men grow richer on the public resources, and we forced its acceptance.

We had to open up water power to legitimate development and at the same time protect the public against power monopoly or unfair charges. The principles laid down by the Forest Service at that time for water power regulation later became the model for the Federal Water Power Act. A little later on we restored the real agricultural land within the Forests to entry by homesteaders.

All these things the big interests and their political tools bitterly opposed. They did their best to destroy the National Forests. We fought them by earning the good will of the local people—the small settlers, ranchers, graziers, timber operators, and others. We built up a force in the field with the technical competence to put the guiding principles into effect, and thus we won the support and respect of the public. So far as possible, we got Western men as forest officers, though naturally and rightly we took on a great many Eastern-trained technical foresters. Equally important was the thoroughly decentralized administration we worked out as a means of cutting red tape and of giving local forest officers the power to act promptly in carrying on forest business with the public.

The Forest Service has always been rightly proud of its personnel. It was and is absolutely free of political taint, fearless, competent, and extraordinarily devoted to the public interest. I doubt if there is anywhere in the world a better body of public servants. Without them, the National Forests would have perished long since.

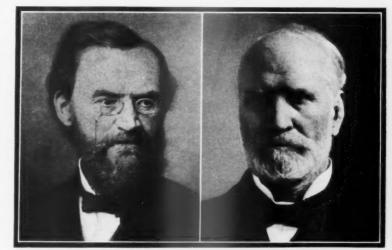
While putting the National Forests under effective administration, it was also our purpose to bring about the

reservation of as much of the remaining public timberland as possible. In all these purposes, we had the full support of Secretary Wilson and preeminently of President Roosevelt.

Roosevelt was a conservationist by instinct and experience. His outdoor life as rancher, hunter, and naturalist gave him a strong personal leaning toward the conservation of natural resources. Moreover, his political philosophy, grounded on the square deal and equal opportunity for all, abhorred the prevalent plundering of natural resources for the benefit of the strong and unscrupulous.

From the very start, I had full encouragement from the President in the work of the Forest Service, as well as in much other conservation work in which it was my great privilege to have a hand. Conservation became one of his most important policies, and Roosevelt became a most dynamic and powerful champion of conservation.

Fortunately for the American people, President Roosevelt was most active in furthering the plans for the rapid expansion of the National Forests. For several years before the transfer much of the work of the Bureau of Forestry had been directed to learning the forest problem and getting ready to determine suitable additions to the forests. So the newly created Forest Service was prepared for an astonishing growth. On February 1, 1905, the National Forests contained 63,000,000 acres. By 1907 there were 159 forests with an area of over 150,000,000 acres. By 1909, they had reached their peak in the total of approximately 170,-



Carl Schurz

James Wilson

As Secretary of Agriculture James Wilson brought powerful support to the creation of the National Forest system, while Carl Schurz, with his European outlook, was among the first to suggest retaining public timberlands in public ownership.

000,000 acres net area, the equivalent of one-eleventh of the entire area of the continental United States.

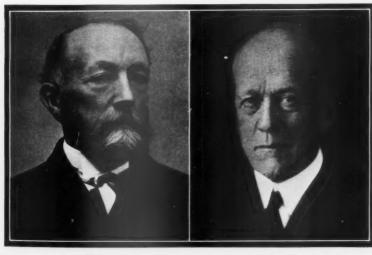
In 1907, the Act of March 3, 1891, authorizing the President to make reservations, was largely nullified. Senator Fulton, of Oregon, had offered an amendment to the agricultural appropriation bill revoking this power in six Northwestern states where there were still extensive public timberlands.

The President did not wish to veto the appropriation act in case the amendment should pass, so I recommended to him a plan first brought to me by William T. Cox, one of the able young foresters of the Service, that as many as possible of the lands involved in the amendment should be pro-

claimed as National Forests before the amendment should take effect. The Forest Service already had a great deal of information on these forests, but it had to work day and night to put the surveys, maps, and final recommendations in shape before the President must sign the appropriation act.

After signing the proclamations that added 16,000,000 acres to the National Forests, the President signed the appropriation act. At first the enemy were jubilant at getting the amendment through, but soon they changed their tune. "The opponents of the Forest Service," said Roosevelt in his Autobiography, "turned handsprings in their wrath, and dire were their threats against the Executive, but the threats could not be carried out and were really only a tribute to the efficiency of our action."

That incident was only typical of the vigilance and (Continuing on page 674)



Arnold Hague

Charles Walcott

When National Forest history was being written, these men—then officials of the United States Geological Survey—were leading spirits in the campaign for a sound National Forest policy.

# Michigan's Game Dog

The Story of a Game Survey and Max Berry, the Gordon Setter Who Helped Make It

By H. M. WIGHT



HE bird dog, faithful and favorite servant of the huntsman, has joined the ranks of the conservationist. So successful has its intelligence, speed and endurance been used in taking a bird census in Michigan that "dog sense" may assume an important place in wild life investigations of the future.

To Max Berry, a Gordon setter, goes the honor of establishing for his kind an enviable place in wild life conservation work. Trained especially for his unique career, Max has shown natural inclinations for the job and demonstrated the possibilities of the successful use of a dog in game survey work. Following the commands of his handlers, he worked fast and ranged far, committing himself commend-

ably under all circumstances. Aside from his remarkable performance in "counting birds" the degree of safety in which he can be used in any place and under any condition has made him most valuable in continued field work.

Max's career began in the winter of 1928 when the writer undertook an investigation of Michigan's privately owned state game refuge system. The project was sponsored by the School of Forestry and Conservation of the University of Michigan, and the Michigan State Department of Conservation, and called for a survey of 118 refuges, scattered throughout the lower

peninsula of the state. The plan called for a census of game would provide an index to the ability of the refuges to supply

those conditions conducive to game bird welfare. The idea of utilizing a bird dog to assist in an accurate determination of the presence or numbers of game birds on the refuges was based on simple facts, that a game census depends upon the location of the game species and that the bird dog has for many years been trained and used specifically for this purpose. The choice and training of the dog, however, is highly important, for it is not logical to expect that one trained after the usual method of developing a field trial winner would fit into this type of work. The average grouse and woodcock dog would not prove at all successful, as a rule, and if it came to a choice between the two types the wise selection would undoubtedly be made in favor of

> the dog with the field trial background. In either case considerable retraining would be necessary. The most successful method, unundoubtedly, is to carefully select and train a young dog especially for game survey work.

There is as much difference between dogs as between men, and the investigator should use the same good judgment in selecting a young dog as he demonstrates in choosing a field assistant. In fact the characteristics are much the same for each. After several years' experience in this work the writer feels that the prime essentials for a good dog for investigational work are



This indicates the difficulty encountered in locating game birds, for their nests are cunningly placed where the surrounding growth thoroughly disguises and conceals them.

willingness to work constantly for long hours under the most birds on the refuges, for it was believed that this population trying conditions, endurance which permits a dog to stand up under hard work and over long periods, and a high development of dog sense. This characteristic will be demonstrated by the dog's reaction to the demands in the field, and his ability to handle birds of various species and under diverse conditions in his own particular but satisfactory manner. In telligent independence of movement, industry and ability to find game is essential. This of course, includes speed, nose, the knack of locating the handler and reacting to his movements from a distance and especially a timely return from the field. Tractable conduct in the field, car, city and on farms is necessary in a dog which is constantly used for survey work. Style is not necessary but is to be desired in a bird dog at all times.

These factors become pronounced only in the mature dog and are dependent to some extent upon the dog's training, but it is obvious that a dog must have at least the essential qualities as potentialities, in order to mature the characteristics desired, and the problem presented in selecting a young dog is that of determining his latent possibilities.

Among the factors to be considered in the puppy are good breeding, desirable traits that are noticeable at an early period and conformation which indicates intelligence, speed and endurance.

Very little discussion is necessary regarding breeding, for too many good family strains have been developed, regardless of the breed which

Demonstrating his remarkable ability to scent game at long distances, Max Berry, traveling at full speed, cut across the alfalfa field and came to a steady point, which he held without deviation until the bird was flushed.

one particularly favors, to cause any difficulty in making an intelligent choice. Among the individual traits which may be mentioned indicating the dog's future are aggressiveness, alertness, quick response to early training and a tendency to hunt, although this last factor may develop at a later period.

The dog used in this investigation, Max Berry, is a Gordon setter possessing much greater speed and ranging ability than the average bird dog shows. He has been trained to follow the movements of his handler and only infrequently goes beyond his control. It has however, repeacedly been demonstrated that the characteristics to work fast and wide are important factors in the successful use of a dog for game survey purposes and every precaution has been taken to retain

these natural inclinations. Max was raised on a small farm where he became accustomed to all types of domesticated stock, including ducks and turkeys, and because of this early experience he is a perfectly safe dog to release in a farmyard or to run in any pasture.

During 1926 and 1927 he traveled thousands of miles on the running board of a car and thereby has become exceedingly skillful in the art. Too,

he is epecially successful in caring for himself in traffic. These are important attributes, as a dog not properly experienced in these particulars might prove to be a



constant annoyance

on a long period investigation, for much time as well as mental and physical energy can easily be expended in hunting a lost dog, or in worry regarding his safety. To illustrate how valuable Max Berry's training in this particular has been, mention is made of the fact that the first day's experience with a pointer, purchased from a well-known trainer in the South, caused more worry and fatigue than Max Berry caused in all our travels together over thousands of miles.

The pointer likewise illustrated better than words the value of a dog that can successfully handle that illusive bird, the cock pheasant. Those who have hunted this bird understand its exasperating habit of running down a ditch or through heavy cover

until the boundary of the area is reached, finally flushing well out of range. This pointer, trained on quail, would invariably stop on a beautiful point at the first strong whiff of a cock pheasant and failed to move out and keep the bird located until it could be flushed. Max Berry would move in and honor the pointer beautifully, but with a certain indication of disapproval of the method being used. Finally he would rush with

a wide, sweeping movement far in advance and to one side and soon make game, locate the bird, and by quick, intermittent rushes finally flush it well within range. By this almost unbelievable ability Max Berry very seldom lost his bird and usually it required but a few minutes for him to handle the wisest cock in this manner.

It may be of some value for those who in the future desire to use a dog for this particular type of work to learn the method employed in training Max Berry. His training did not start until he was about a year old. At that time he knew nothing of birds, and no attempt was made at first to introduce him to them. Being a companionable creature he showed no desire to leave his master's side. He was kept

out in front, however, by throwing clods of dirt which he chased. These were thrown first to one side and then to the other. He was not permitted to return between the casts, and in this manner he learned to follow the motion of the hand. A whistle has never been used on Max Berry, the dog being handled entirely by signals. He was trained to

come in whenever his master assumed a kneeling position.

Early in August he was taken into a big clover field where there was a flock of half-grown pheasants. He immediately made game and constantly crept nearer until quite close to the birds. He then suddenly broke and rushed in, catching one of the young pheasants on the wing, which he retrieved dead. This did not worry the trainer and the dog was given the bird which was taken home to his kennel. A few days later he was introduced to his first full grown cock. He worked up on this bird as stealthily as a cat. Suddenly he settled himself for a spring which occurred simul-

taneously with the rise of the bird. He caught the cock by the base of the tail and held it until his trainer released it. For this rather uncommon stunt he received hearty commendation. Probably these two experiences in his young career were handled ideally, for later he was placed in a position where his indomitable urge alone saved his reputation. The next time he made game his trainer was close by and he was carefully steadied to a point, and then taken out of it and led far to one side and allowed to return to the young birds from the opposite direction. This was repeated many times, and finally when he became steady on point he would, when sent on, break his point, make a side cast, not always sufficiently wide and far enough to head off his bird to be sure, but well enough to illustrate that a dog can be trained in this particular knack so valuable to the pheasant hunter. Later when he took up self-hunting, he perfected this habit which has meant so much in this game survey.

Upon moving from Oregon to Iowa, Max Berry had a new adventure with a pheasant which nearly proved to be his undoing. In northern Iowa pheasants are hunted in cornfields. During the first day of hunting there he preceded eight men through a cornfield which provided cover for a large flock of pheasants. He was nicely straightened out on a point when the birds flushed and from sixteen to thirty shots rang out in rapid succession over the very head of the dog. This was too much for his sensitive nerves and for months following this experience he was both gun shy and bird shy. It is needless to mention that his master learned a lesson never to be forgotten.

Upon entering one of the refuges Max Berry always remains at heel until he is sent out. Then he will move in

wide casts at great speed, except that he frequently appears to have sized the situation up completely before he moves off, for he will start out in the direct line of a covey of quail or a flock of pheasants. This faculty of going directly to game may possibly be explained in two ways. First when moving into the wind a bird dog undoubtedly has a remarkable

#### Mr. Woodcock, Esq.

Dignified gentleman; very sedate Seemingly careless of your fate, Calmly watching "Old Don" close in---I'll bet a dollar I saw you grin.

Scuffled leaves and the rustle of brush,
Whistling wings in an upward rush,
Two clean misses—left and right;
And the calm little gentleman drops from sight.

Long life and luck to you, Happy days and journeys too, All in russet, black and tan Grinning little gentleman!

-JOHN PHELPS.

ability to scent game at long distances, and second, it seems apparent that the experienced dog in some manner difficult to explain readily makes rapid choice of good cover. Some will doubt the dog's ability to see sufficiently far and well to distinguish one cover from another at a distance, but regardless of how well they may see the exact outline in detail, they must sense enough to stimulate them to activity in the direction of cover that is good. To illustrate the dog's ability to scent game at long distances, mention will be made of one particular experience. A flock of pheasants were known to frequent a certain second-growth

alfalfa field, and wishing to locate this flock two dogs were sent in. Max Berry, traveling at full speed, head up, did not hesitate a second but cut diagonally across this field, over the fence and nearly across a second field out of sight. From a fencepost he could be seen on a steady point in the alfalfa. Upon coming up some scattered birds were flushed in front of him. He did not break his point, but held until another bird was flushed. He then went a few steps, pointed again, and repeated this several times, until two flocks were flushed out, the second dog coming in to locate some of them. Max Berry then moved out to an adjoining field.

This trait of picking up singles, illustrating the remarkable reaction a good dog has to a bird's scent, was demonstrated in the late fall when the quail dog from the South flushed a nice bevy. The pointer worked out two singles and then was lost in a hunt for a single in a hedge. Max Berry came in and picked up single after single, working in a heavy weed cover until twelve birds were individually flushed. Mention is made of this ability for three reasons: First, as an introduction to a discussion of his inability to locate birds during the spring of the year; second, to indicate the feasibility of utilizing this remarkable sense in game survey work; and, finally, to allay any skepticism on the part of those who are inclined to believe that man can accomplish as much while making a game bird survey without the use of a good dog.

It should be kept in mind that the location of game birds was only a small part of this investigation of the game refuges. A map was made, information was gathered on predatory birds and mammals, signs were examined, and numerous other factors were considered simultaneously with the game

bird census and for this reason the dog was left largely to himself, and he necessarily more and more became his own handler, and day by day did better work. The distance he covered was beyond reckoning, but an indication of the miles he traveled may be obtained by an illustration. On one day the distance traveled by the writer was conservatively estimated at twenty miles. This dog worked constantly and ran at fast speed throughout the day, with only a few short intervals of rest in the car. When in the evening it was necessary for his master to rest for a few minutes before making the last forty rods back to the car, Max Berry came up and looked on in a doubtful way, whirled about, jumped a woven wire fence, and went to the far corner of an oat stubble field. Here he jumped a second fence and flushed his fifty-fourth bird for the day. This was after approximately twelve hours of almost constant work. Many dogs have hunted this long, but few so long at his speed over muddy ground. He was especially valuable during this day, as much of the area was low, drained marshland, cut by flooded ditches very difficult for a man to cross. The dog was repeatedly sent over these ditches into cover that was quite inaccessible to one working alone. It is conservatively estimated that the efficiency of the day's work was more than trebled through the assistance he rendered.

Max Berry's best day's work from the standpoint of birds flushed, was made during an attempt to determine the total population of game birds on a 2,000acre tract. This work was done during the fall when the temperature was high, but fortunately the area was well watered, providing opportunity for frequent dips and chances to quench his thirst. During the brief period of about eight hours, accompanied by the pointer, 116 birds were handled successfully. The cover was exceedingly difficult, being a combination of cornfields, abandoned grass and weed fields with an abundance of Canada thistle and bramble, tangled sedge and grass marshes and brushy cutover land grown up to berry bushes.

In this particular investigation no man or group of men could have covered the area with the same efficiency, regardless of the time expended, for the cover was so perfect that it is doubtful if man alone could have flushed fifty per cent of the birds.

In order to obtain the full benefit of a dog's assistance it is necessary for the handler to study his reactions to every stimulus and the dog should be allowed to use his head freely. For instance, in this particular work, good game cover could not be chosen. We were obliged to take these areas dedicated as refuges as they came. Many of them did not possess a game bird and sometimes the dog hunted an entire day without locating a bird. Those who know bird dogs appreciate that a good dog readily determines the presence or absence of birds. Fortunately Max Berry's master was not a "cut-and-dyed-in-the-wool" handler who will not toler-

ate a dog's playing with a rabbit providing a bird does not exist on the area. Max Berry spent considerable time hunting rabbits. There was no mistaking his puppylike attitude when he was pursuing this pastime. The tally of cottontails was nearly as important a part of the census as was that of game birds and for this reason there was an advantage in using a dual purpose dog, especially as it was known that he would drop such puppy work immediately upon scenting pheasant or quail. Among the animals toward which he showed particular interest were squirrels, rabbits and cats, and on several occasions he attracted the writer's attention in a most amusing manner to skunks. A skunk was always quite a treat for him. He seemed to consider it as something amusing instead of something to chase, for he would stand over a skunk with front legs spread apart, tongue out and ears up, his tail wagging happily.

Considerable controversy has arisen regarding the time and conditions conducive to the best reaction of the dog to game, and it has been especially interesting and instructive to have the opportunity for continued observation on a dog's reaction to changes in temperature and especially to his efficiency in locating birds during the spring mating and nesting period. From February to May a tabulation was kept of each bird located by the dog. This consisted of a record of the time of day, weather conditions, locations and description

of cover, number and sex of birds, when this could be determined, and the activity of the dog. During February a total of 351

birds were located in thirty-seven different groups. The dog made thirty-two points and held staunch on thirty. He rushed in on three groups, and flushed three while running and passed by one.

March gave a total of 190 birds in forty-four different groups, forty of which were pointed. The dog held staunch on thirty-five, flushed four while running but passed none that flushed.

The first two weeks in April were spent by the writer in an

investigation to determine the various species of birds and mammals taken by pole traps. Thus only 104 birds were located, during the last two weeks of the month. They were in thirty-seven groups. Max Berry made twelve points and held staunch on all. He flushed twenty-two while running, and passed by three.

During May he was not at all successful in locating or handling birds, and so few birds were located that it was decided that May and June were very unsatisfactory months for making a game survey with a dog. By the latter part of July and the first of August he once more was back in excellent form and by September he could find birds with his usual ability. This seems to be the usual experience of many who have handled dogs. Only once after the first of April did he flush more than two pheasants together and then two hens and a cock, the usual combination being either a lone bird or a cock and hen. (Continuing on page 637)



Max Berry's performance on this job proved conclusively the value of a good dog in making a game survey.

# Forestry In Farm Relief

By ARTHUR M. HYDE

Secretary of Agriculture

VERPRODUCTION in any industry inevitably creates a buyer's market and lower prices. In such a market the marginal producer suffers most severely. Even a small reduction in income wipes out his profit or turns it into a loss; and he has been unable to create a surplus on which to tide himself over an unprofitable period. He usually finds it difficult to liquidate his plant and must continue to operate as long as he can in the hope of a change for

the better, or must cut production or close down to await a change in conditions. His ability to survive the depression depends largely on how far he can go in reducing carrying charges.

The output of most industries is based largely on employed labor with which the operator has no long time contractual relations. He therefore has an immediate opportunity to cut his expenses by laying off this labor. If other industries are prosperous labor is in part able to adjust itself by securing employment elsewhere. Market for the goods produced by the industry in difficulty is not materially reduced by the laying off of its own employees, and the operator is thus in a measure able to trim his sails to weather the storm.

When a depression hits agriculture it finds the farmer in a different and much more difficult situation. The greater part of farm labor in this country is per-

formed by the farmer and his family. This labor cannot be "discharged," neither can it be readily disposed of elsewhere in order to reduce carrying charges. Employers in other industries are not easily found in the vicinity, and the farmer, being by himself or assisted by minor children, cannot leave the farm for more than a few days at a time without abandoning it altogether. He, therefore, feels compelled to continue on, producing farm products which do not sell for enough to afford a reasonably good living and which add to the surplus that makes farming in general unprofitable.

Millions of acres of farm lands which do not under present conditions produce enough to support their owners properly are suitable for growing trees. A good deal of this land will restock to forests naturally, immediately farming

operations cease. Indications are that the wood that might be grown will be needed and that on some of the land at least it may be grown at a profit. If such land could be switched from crop production to timber growing the change would both help the general agricultural situation and put the land to profitable use. At the same time the farmer's energies would be released for a new start in another field instead of being used up in a struggle filled with hardship and in most cases

foredoomed to failure. The working out of a plan for such a change on a comprehensive scale, however, must be preceded by an economic land classification. We need to know whether areas of impoverished or decadent agriculture could be restored to prosperity by a reorganization of farming and what measures in the way of extension programs and provision for credit, would be needed to accomplish the reorganization. We need to know with certainty what lands are best suited, physically and economically, for timber growing rather than for crop production. We need to know what lands could be profitably reforested by private enterprise and what lands would have to be reforested, if at all, by public agencies.

As an incident to the working out of the purchase program under the Weeks Act and its amendments, the government has incorporated in National Forest

purchase units a considerable acreage of marginal farm land which at one time or another has been tilled. These lands have been included because they blocked out tracts of forest land and not with the idea of having any effect on agriculture. Nevertheless their purchase has reduced the area of low-grade farming lands. Also the owners have been paid a price that represents their value for growing timber and have thus been afforded a chance for a new start elsewhere with some capital to begin on.

There are farmers located on marginal land in forest regions whose continuous residence on these farms might be insured by the reforestation of nearby lands. The work of rehabilitating the forest would offer employment in the immediate future. The growth of the trees to a size which would allow the harvesting of products would furnish a con-



HON. ARTHUR M. HYDE

tinuous demand for labor, and through support of industry a continuous source of public income. Thus the combination of agriculture and forestry would provide both a good living to the farmers and adequate support for schools, roads, and other public undertakings essential to satisfactory social life.

Another class of farmers who may be helped by forestry are those who in addition to their farm land own woodlots which contain trees of merchantable size, or trees that will, if protected and cared for, be of merchantable size within a reasonable period of years. Where it is possible through better marketing of products and better forestry practices, to create or increase income from these lands, the farmer will have an additional source of income

and a market for some of his labor that he cannot devote to farming during the slack season of the year.

How far it may prove practicable to go in any or all of these directions I am not at this time prepared to estimate. I such recommendations regarding them as seem feasible.



There is every reason to believe that timber crops would offer an important aid in restoring decadent agriculture. This loblolly pine stand has been protected from fire for twenty-five years and is being operated profitably under careful management.

am, however, convinced that they do represent possibilities in farm relief, and this Department will investigate these possibilities as rapidly as possible and from time to time make such recommendations regarding them as seem feasible.



#### INLAND

I am longing for the pine trees, Stately standing; Longing for the sea's low sunsets, Twilight banding.

I would watch again the white gulls, Ever present; Wait the pausing of the low tide, Phosphorescent.

Feel again the fresh salt sea winds, Cheek caressing; Sense my spirit lift and lighten, Grief suppressing.

I am lonely for the coast land, Surf and ocean; Dune and sand and wind and water— Happy portion!

-Ruth Fargo.

Beauty went after the mustard pickle water in no uncertain way—and liked it, as evidenced by the bushed-up brush!

FOR days the sun had been hot and red through the smoke of forest fires. From our mountain ranch we looked out anxiously, wishing for the rain that never came, fearing that the wind would change and bring us into the path of the fire. Fortune was with us and our pastures were saved, but the red terror brought us a visitor, a spotted fawn.

The poor little thing was so hot and tired that morning, and so horribly lost. She could not have been more than two or three days old. Her dainty coat was covered with the white stars—nature's way of protecting such small creatures by imitating the sunlight as

it filters through the leaves. I carried her into the house.
Surely such a little thing would die if left to wander alone, and I doubted if her mother would return, even if she were still alive.

I finally coaxed the fawn

# Beauty

## A Story for Children

#### By Florence Thomas

to drink a little water. Then, not to frighten her, I read, speaking soothingly to her until she became accustomed to my voice. In a few hours she began to make a plaintive mewing noise in response to my tones. By evening she was quite used to me, liked to be stroked and her great dark eyes followed every move I made. When my husband came she made no objection to him. We decided to keep her, and called her Beauty.

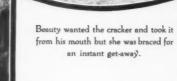
That evening when we milked the goat we brought some to Beauty. She pawed for it but did not understand how to drink from a pail. By accident, she poked her nose into the foam. In a moment the liquid had vanished and one baby deer had settled back contentedly. She slept on the foot of our bed that night. In fact it became a habit that later proved annoying, for she would paw about until she found the particular spot she liked best. It is not pleasant to have a small but affectionate deer walking about on one.

Her second day with us was given to investigation. She had accepted us as friends, but the cat was her first problem. It had fur, was an animal and was friendly.

Beauty all but scratched her head in puzzlement. Later they became pals though

> Beauty's manner was condescending.

> For three days Beauty was tied. Then I let her run and drag the rope. She followed us around and poked her inquisitive, velvety nose



She always waited patiently around ready to follow the horses.

In the snow—Beauty thought it was soap bubbles and tried to eat it all as soap stood high in favor among her favorite articles of diet!



I had to calm her with

a swallow of milk, tie

her to my bed and give

her the cat's pillow to soothe her ruffled feel-

The fifth day I re-

moved her collar. She

made the acquaintance

of calves, pigs, goats,

horses and poultry-

all members of our

large and varied fam-

into everything. She even robbed the cat of her own particular cushion and rolled herself into a ball in its exact center.

The fourth day of Beauty's stay we had company, and with them came a hunting dog. Beauty took to the brush.

"Aha! Whas'sat? The sound of the flivver! Is my family trying to get away from me?"

ily. Some of the animals were curious about her, others suspicious. The poultry went into a panic when she walked among them. Beauty tried hardest of all to become chummy with the Toggenburg goat, source of her

milk supply. But the goat had other ideas and showed fight.

Soon the cat brought five sprawling kittens to the house and began their education as cats. Before long they were licking Beauty's face. There was a reason. We fed Beauty milk in a lard pail. When the last drop was gone she would but the pail, slap at it with her front feet and mew for more. At last she would decide that it was of no use. There was no more. Then the kittens would get busy on her foamcovered face.

All the while they had been awaiting this moment, squatting on the sidelines or weaving about to avoid being stepped on. Now the five of them would trot up and, sitting on their haunches, lick Beauty's face clean while the happy fawn stood contentedly, puffing and blinking and waggling her big ears. Occasionally the kittens would hook a claw into her muzzle to aid them in sitting upright but Beauty did not seem to mind.

One morning, the fawn's omniverous appetite led her into a sad predicament. I had made some mustard pickles and had set the sticky cooking utensils to soak. Inquisitive Beauty came along. Aha! Milk! She drank and drank till her tummy was like a football. I chased her away but all afternoon she grunted like a child that has had too many green apples.

Not long after that she devoured a bar of soap with even worse effects. But sad as the experience was, she never could be cured of the desire for soap. She would push the door open, slip inside and make away with any soap she could find, gobbling it so fast that her muzzle would be a mass of foam. Even after our new house was built, with high back steps, she would watch her chance to slip up on the porch and make way with any stray soap.

The second summer that we had Beauty, she wrecked our garden. She had come to love vegetables and she thought nothing of fences. She could slip between the strands of wire more easily than we could and high jumping was only play to her. So our garden was destroyed as quickly as we put it in. Oddly enough, cucumbers were too much for Beauty. As soon as she ate them she was in distress. She would walk about restlessly, the walk becoming a trot as discomfort grew.

Beauty's chief vice was chewing tobacco. She picked up pieces of discarded cigarettes or cigars, and would even reach

into a man's pocket and make off with his tobacco bag unless he was quick enough to catch her. Her most annoying trait was her persistent desire to be wherever we were. She was like Mary's



The kittens waiting for their party. When Beauty raised her head from the milk-pail, the kittens would immediately get busy licking her foam-covered face.

little lamb. We could never break her of this habit, try as we would.

But what can you do when an animal loves you so much that it is even reluctant to go far enough away to browse? When it tries its best to talk to you in language you can understand? Beauty



The flivver made a fine bed and Beauty always turned around, like a dog, three times before settling down.

had a cry something like a bleat. It sounded like "cummere" with the "mere" a prolonged, nasal whine. She cried a great deal before a storm and was exceedingly restless. I learned to imitate her cry and have at times halted wild deer in full flight by giving that sound, while Beauty would come from as far as she could hear me call.

When our baby boy first came to us, Beauty would stand at the bedroom window and cry and scold. If I imitated her cry and talked sweet nothings to her, she became contented and went to feed even though she had not seen me for weeks.

Our mail box is over half a mile away, but when I was able, I went every day for the walk. Ours was an odd procession. First mother, then myself and the baby, followed by Beauty and two staggering puppies, while behind trailed

the cat and her five kittens. On the way down Beauty was quite sedate but going home was another story. She would caper and prance and leap over clumps of brush. Then she would trot up and nudge us as if to say—"You pokey old things! Can't you get a move on and play a little?" Then away she would scamper, making the leaves an dirt fly under her sharp hoofs.

When we rested, she would rest, but when we traveled she would frolic some more. Her antics threw the puppies into ecstasies of excitement and their pink tongues lolled out as they did their best to imitate her. But the kittens were not so well pleased. With bulging tails and bristling backs, they spit and sought refuge up the nearest sapling.

Beauty became so accustomed to going to the mail box that she sometimes went even when we did not. Perhaps that was because the stage driver always had a piece of gum, candy, or tobacco for her. It was not everyone from whom she would accept food but he was one of her special friends and he has never forgotten the odd friendship he formed with her. If she had not been prone to chew anything which she could bite, she might have been made our mail carrier, but she probably would have made an astonishing mess of the news if we had tried her in that rôle.

Beauty and the puppies played together for hours. They ran and yapped at her heels, making believe they were hunting, until Beauty grew tired of the game and turning on them, slapped them with her forefeet and ran them, yelping, under the house. A little later we would find the three of them stretched out in the sun, grievances forgotten, friends once more.

Later on, Beauty took to following our car. If my husband went alone, I called her to me and gave her bread or peelings to distract her attention. If our family went away together we gave her a bucket of peelings behind the house so that we might get away while she was dining. That did very well for awhile but soon she would grab one immense mouthful of peelings and race after us.

Seeing that we could not outrun her we stopped and asked her to ride. She was used to sleeping in the machine and accepted the invitation, curling down on the back seat contentedly. All was well until we hit a rut. Then she uncurled in a hurry. Another bump and she was gone. No more riding for her. We hoped she would go home. But, no! Arriving at our destination, who should appear in a small cloud of dust but our lovable imp, puffing and panting, her tongue lolling from her mouth. When she reached the standing car, she climbed in for a rest. But when we left for home, she preferred to use her native mode of locomotion and trailed behind.

One evening we were going to a surprise party. Beauty knew there was something in the air and when the car appeared you could almost see that she was planning something. We got ready, put out her bucket of peelings and tore away. We made the five miles to the nearest gas station before going on to the party, and as we stood there who should come puffing and wheezing up the winding and dusty road but Beauty.

She created a great commotion among the dogs as she followed us through town and went with us to the party. She even went into the house with us, to everyone's delight, and after inspecting the card tables and everything new to her, she withdrew. She lingered awhile outside, then must have started home for she did not appear when I called to her after the party. About twenty minutes after we arrived home Beauty came along. She was pretty badly blown. After that she did not follow us much. Perhaps her curiosity had been satisfied, or, perhaps, she found it too much trouble to follow when we always returned the same way we went.

In the spring I spent six weeks away from home and Beauty wandered about discontentedly, crying for me. When I returned she was asleep under the house. I called "Beauty, cum-mere!" With a glad cry she pranced to meet me, waving her bushed tail, and, for the first time, I noticed the musky, sweet-cidery deer scent in the air. Usually deer give out that scent only in fright or pain, but I think Beauty threw it out in glad surprise.

When hunting season came on we were anxious. As long as she had been a baby and had not wandered far we did not give it a thought, but now she was a fat, well-grown deer, and though she carried no horns she acquired a bullet hole through one ear.

One damp day after the season had closed, my husband was out looking for signs of wild hogs. Of course, Beauty tagged along and, when the dog stumbled on a large, thin doe hidden in a thicket, the creature bounded away in wild flight. Beauty dashed after her, overtook her and challenged her to fight. The action was so vicious and fast that he was sure Beauty crippled the poor animal.

Not long after this, we became aware that she was carrying on a courtship. She used to feed in the flats below the house and even across the highway beyond the mail box. We noticed tracks in the road, always two sets of tracks coming up our road to our second gate. But, at the gate, the second set of tracks always turned aside. Coy, secretive Beauty! The tracks gave her away, although never did we get so much as a glance at the bashful fellow who only brought her as far as the gate on her way home.

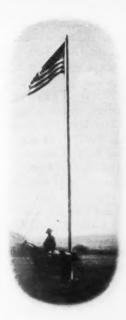
She became increasingly temperamental, and no longer frolicked with the dogs. Once she reared up and danced forward wickedly slapping at me with her forefeet, and one of her feet struck me on the back of the hand, bruising it badly.

My husband was repairing a fence when she took a peevish spell. She stamped and threatened him till he went behind a tree. She attacked the tree, then came around after him forcing him to climb out of her reach. It was evident that she had turned against us. A few days later she was missing. We have not seen her since, though a friend told us that he had seen a deer, followed by two fawns, drinking at a spring a few miles away. The mother had a bullet-clipped ear and she had not run from him as most deer do. So I presume he had stumbled upon Beauty living her own life naturally in the great forest as deer were meant to do.

# From a Forest Ranger to His Dad

By Charles Newton Elliott

To those who have any illusions concerning a forest ranger's life, this series of letters, which will be continued through the November and December issues, will prove enlightening. In this first series a young eastern forester, just out of college, finds that the making of a forest ranger calls for unique ability, youthful enthusiasm and unfaltering courage.



Plains, Montana.

My work has begun! Day before yesterday I stepped off of the train in a little Montana town. Plains, they call it, but to see any plains here a fellow sure has to stretch his imagination. The mountains are as thick as hills in an ant village. The valley is about a mile wide from one range to the other and the Missoula, a wide, blue river, flows right down the middle of the valley. Howard, the ranger here, told me that long ago the valley was named Wild Horse Plains on account of the numerous bands of cayuses that ran wild in the hills, and that the name finally dwindled down to Plains.

You would like the ranger, Dad. He's the type of fellow that you read about—long and lean and bronzed, a few inches over six feet and weighing more than two hundred

pounds. One of the fire guards told me that he was the strongest man in the valley and I can truly believe that statement. He said that early this summer Howard ran across a big bear in the Thompson River country. He was unarmed except for an ax. The

bear showed fight, and knowing that he could not do much damage with the ax, Howard let out a yell and climbed the nearest tree. The bear followed. About halfway up the bear swung its claw and hung it in the heel of his boot. Howard clung on like grim death and they both swung loose. Imagine, now, holding himself and a three-hundred-and-fifty-pound bear in the air and him with his hands hooked over a tree limb. It lasted about five seconds before the bottom of the heavy logging boot ripped out and the bear fell to the ground, and went off into the woods. Howard followed him for about three miles before he lost the trail. But the ranger swore eternal vengeance on all bears, and that one in particular.

I asked Howard about the story and he showed me the boot. He also made a forceful statement that he was going to get that fuzzy so-and-so before winter came. I timidly

> suggested that if he would let me go along I might be able to help him run by lending moral support and physical suggestion, He laughed and agreed. He thinks he knows where that particular bruin dens and this fall we are going up and drag him out. Howard says



In the wild Thompson River country, in Montana.

that bears are in a dormant stage after they begin their winter sleep—sort of unconscious—and they are easy to handle. I'm looking forward to that trip, though I don't know what I will do when things begin to happen seriously.

The ranger station here is a small white building on the edge of Plains. It is covered with rose vines, and the landscape decorations are spruce and fir brought down from the woods. There is a big "United States Forest Service" sign over the door. I look at it with a feeling of pride, for it is my first headquarters with the Forest Service. I am informed, though, that I will work up in the Thompson River country where Howard had his little skirmish with the bear. The fellows here have been kidding me by suggesting that, if I come out at all this fall, I will be wearing a bearskin coat. They advise devious ways of getting the bear. One suggestion is outrunning bruin and staying in front of him until he drops dead; another is climbing a tree and waiting until he starves to death. One fellow even suggested that I rub mustard on the end of his tail and let him break his neck trying to spit on it.

Howard sent me up on one of the mountains this morning to help put out a small fire. Clarence, one of the guards,

and I found that it had burned to the edge of the snow on one side and some native had beat it out on the other. We went around the fire line, saw that it was out, then walked six miles back to the station in a mixture of sleet and snow and rain. Think of sleet

and snow in June! I leave tomorrow for the wild country, Dad. A fellow came in last night from the camp on Fishtrap Creek where I am going, and brought word that the snow there is four inches deep. Looks as though I am going to do some shivering.

I just stepped out to see about my bunk in the tent back of the station. There are no stars tonight, and it is cold. The wind is blowing snow flakes off the mountain.

It's nine o'clock and they call that late. Everyone is snoring and from all I have heard about bears, it sounds like a grizzly convention. Good night, Dad, and I'll write you from the camp on Fishtrap Creek.

Your son, ranger,

CHARLIE.

Fishtrap Creek Camp, Montana.

MY DEAR DAD:

We have been on the Fishtrap for almost a week now. When we came into camp the valley floor was covered with snow and all the firs and pines and tamaracks were white and dark green. It was the prettiest sight I have ever seen. Bob brought us to Big Spring in the truck and left us there. We tramped into the woods a couple of miles on a Forest Service trail, and then followed blazes for another mile. The country we traversed is like a flight of gigantic steps—a series of flat plateaus divided by terraces. It is forested with tamarack, western yellow pines, that the fellows here call bull pines, and fir and spruce. There are no hardwoods like oak and maple and ash and other broadleaf species growing in the eastern forests. The streams, though, are bordered with scrubby willows and alders.

When we came to the edge of the last steep terrace it was almost dark. We could see a fire through the trees somewhere below us, casting grotesque shadows on the snow. After the stillness of the forest, the entire valley seemed to be filled with the roar of running water. Charlie let out an awful yell that made me jump and it was immediately

answered by someone in camp. My feet were like leaden things when I finally slid out of my pack and looked around for the supper table. I have eaten lots of food cooked in the woods, Dad, but I found out that night how good grub can really taste.

After supper, Charlie



We packed equipment on a gentle old horse while taking our examination until the poor animal could hardly stand up.

and I made our bed by cutting spruce and fir boughs and arranging them before the fire. We talked and smoked a long time after everyone else had turned in. I went to sleep looking at the stars that were so close and brilliant and listening to the splash of the creek and to the wind up on the ridge.

Charlie aroused me the next morning a little after daylight. When I sat up, he placed his finger against his lips and pointed toward the open ridge across the creek. A black bear was up there with her two cubs, turning over rocks and logs, working her way toward the top. I was wide awake in an instant. We watched her until she had almost reached the top of the ridge, then Charlie let out one of his yells. She looked back toward camp for a moment, then ran over the ridge with the cubs close behind. They looked

make a long story short, my feet remained frozen for about two days and I found a new blister with every swing of the ax. We cut a trail eight feet wide, following the blazes back toward Big Spring to the main trail. My stiffness and soreness gradually wore away and I began putting in an honest day's work. The snow melted and the ground became soggy and the creek swelled to the limit of its

We have seen several deer grazing in the open timber on the plateaus and yesterday Bill showed me the tracks of a big bear that had been prowling close to camp. Bill said that he had come in to raid the garbage pit. It begins to look as though the big game tales I have heard are no exaggeration.

Sunday, Charlie and I followed Fishtrap Creek for two miles to where it runs into Thompson River. We were fishing for trout and I can truthfully say that it was the most enjoyable Sunday I have ever spent. We climbed over logs

from pool to pool, wading sometimes, and going around the deeper holes by climbing up the sides of the cliffs. We saw bear signs all along the creek, and once we thought we heard one on the ridge.

Dad, to say that I am wildly enthusiastic about this country would be putting it mild. There is a sort of coolness and vitality in the air that gets into my blood and makes me think of cleanliness and strength. Sometimes I sort of wonder why I have spent my life putting book sense into my head when all this was waiting for me. What good are ideas and opinions when any one of these fellows out here can hold my two wrists in one hand and I cannot move? And I was considered fairly strong in school. I ought not to talk that way, Dad, for I appreciate the training you have helped me to acquire, but I wonder sometimes.

Howard called today and informed me that I was to come down next week and take the lookout examination. They are considering the establishment of a new lookout point on Thompson Peak, the highest mountain on the forest. I am to build a lookout tower there and watch for fires. The nearest fire guard lives ten miles away at Rock

like small black balls bouncing along. After break- Creek Ranger Station and the nearest trail is seven miles fast, Bill, the boss, gave me a double-bitted ax and from the top. What a whale of a time I will have! They told me to do my stuff but watch the blisters. To say that Thompson Peak is right in the middle of bear

country, too.

So long, Dad, and I'll tell you all about the exam. next week. Affectionately your son, CHARLIE.

> Fishtrap Creek Camp, Montana.

DEAR DAD:

The "smoke-chaser's exam." or "guard school," as it is called on some forests, is over, and it was one of the most interesting bits of schooling I have ever had. Wednesday, three of the fellows here in camp and I walked out to the road at Big Spring, where we were picked up by Bob and carried into Plains in the Forest Service truck. Thursday morning the examination-training would be a better word-began and it lasted three days. The supervisor came up from Thompson Falls, which is headquarters for the Cabinet Forest, to help Howard teach us a few things.

Early Thursday morning the super and Howard went into the woods across the river and tacked small papers, with num-

bers written on them, on twelve or fifteen trees. Then they took compass bearings on all the trees. After breakfast we were carried out to the central point and each of us given a compass bearing. Our task was to find the number a certain bearing represented and come in for another bearing. Then out again to find another number. That sounds easy, but try following a straight compass line through the woods for half a mile to one certain tree when you don't have any idea which tree it is. One fellow came in and said that he had chased the tail of a buck deer through the woods for two miles, thinking it was one of those papers with the number on it. Another fellow brought in three numbers from one bearing. The test lasted all day and each of us found five of six numbers. I went out on one compass bearing four times before I could locate the tree. This practice was to teach us to locate fires when we had the compass bearing from a certain station.

Friday morning we studied the ranger telephone, talking back and forth over the distance of the yard in front of the ranger station. And Friday afternoon we packed equipment on a gentle old horse until the (Continuing on page 654)



I am to build a lookout tower on Thompson Peak and watch for fires.

# FOREST PEOPLE

## A Woman Points the Way

By Planting 5,000,000 Trees, Mrs. Walter C. White Stimulates Forestry in South Carolina

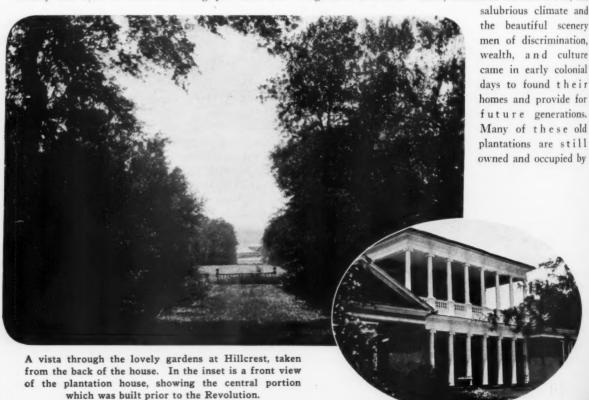
By Josie Platt Parler

In the gardens are found magnificent pyramidal cypresses, planted over a hundred years ago from seed brought from Italy at that time by a royal house guest.

ERHAPS no state in the Union is richer in tradition and romance than South Carolina; certainly no community can boast a more interesting past than the

neighborhood of Stateburg. Paralleling the Wateree River is a long, narrow ridge of highland known as the High Hills of Santee. Here, because of the fertile soil, the

> the beautiful scenery men of discrimination. wealth, and culture came in early colonial days to found their homes and provide for future generations. Many of these old plantations are still owned and occupied by



descendants of the original settlers. The best-preserved of these homes and one which touches the history of state and nation at every important angle is Hillcrest, the home of Mrs. Walter C. White, of Cleveland, Ohio, and Stateburg, and has come to her through direct ownership in her family

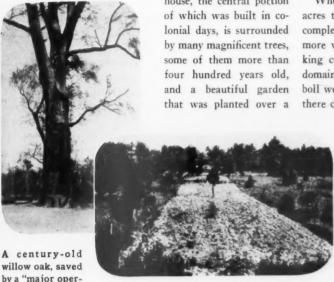
since the Revolution. The house, the central portion of which was built in colonial days, is surrounded by many magnificent trees, that was planted over a than four hundred years old. On the sloping lawns many unusually beautiful live oaks, beeches and other trees planted a century ago by Dr. Anderson, are still in perfect condition. Here on the sloping lawns the old sun dial and a haughty peacock-too exquisite to be real-add to the impression of leisurely graciousness.

When Mrs. White came into possession of the 12,000 acres that make up Hillcrest plantation, deforestation was complete except in swamp land, and even there most of the more valuable timber trees had been cut. For generations king cotton had been encroaching more and more on the domain of forest monarchs. Following the invasion of the boll weevil, which laid waste thousands of prosperous farms, there came throughout the infested sections a renewed sense

> of the value of timber as a possible financial asset, and a consequent realization of the folly of the old policy of indiscriminate clearing of land.

> From a long line of distinguished soldiers, statesmen and scientists, Mrs. White has inherited a deep love and understanding appreciation for the beauties of nature—a love that, when opportunity offered, inspired her to launch two years ago the largest reforestation program ever undertaken in South Carolina. Three or four times on her visits south she started

pine seed beds at Hillcrest, but the lack of technical



ation" for which two tons of steel and concrete were needed. Simply and effectively fire-prevention is enforced on the plantation by a system of fire lanes, (Right) kept plowed and open.

century and a half ago. The walk leading from the back door of the mansion through the garden to the entrance through mock-orange-bordered "lovers lanes" forms a vista of breath-taking beauty.

Many rare and interesting trees and shrubs planted by Mrs. White's great-grandfather, Dr. William Wallace Anderson, and his close personal friend, Joel R. Poinsette, more than a century ago, are still flourishing. Among these is a large camellia-in the early springtime covered by magnificent white blooms-which was planted by Mr. Poinsette on one of his frequent visits to Hillcrest. Here too are what are thought to be the oldest pyramidal cypresses in America. These were planted one hundred and four years ago from

seeds brought from Italy by an Italian count when on a visit to the Sumter family in Stateburg. Mrs. White, while in no way altering the original arrangement of grounds and garden, has worked consistently to restore and care for the valuable and, in some instances, historic trees and shrubs.

During the past spring one of the two century-old willow oaks that stand on either side of the front entrance was saved by a "major operation." An equal amount of work was done on the magnificent tree known as the Spy Oak, so called because two Tory spies were hanged there by General Sumter's men during the Revolutionary War. This tree is nine feet in diameter, has a spread of one hundred feet, and is more



Snapshots of the Hillcrest nurseries-established by the owners to grow the 5,000,000 seedlings for reforesting Upper right: A bed of longleaf pine seedlings six months after planting.

knowledge on the part of the negroes on whom she depended in her absence to care for the plants brought about very unsatisfactory results. Seeing her interest in the work and realizing what it would mean to Hillcrest should she succeed, Mr. White suggested that they go into the work of reforesting the denuded acres in a scientific manner and on a scale big enough to get results.

The reforestation idea had its inception in the mind and heart of Mrs. White's mother, the late Mrs. William L. Saunders, who for many years took every opportunity to protest against the ruthless cutting of the forest giants and the tragic waste occasioned by heedless burning off of woodland and old fields. She could not have foreseen the ample proportions which her dream would assume when realized, but the present work of rehabilitation is a fitting recognition of the vision which inspired her as a pioneer in forest conservation and restoration.

At the beginning 200 acres were set in longleaf pine seedlings. These have made remarkable growth and the loss in numbers is negligible. Another phase of the work taken up at once was the protecting and thinning of clumps of loblolly and shortleaf pines already growing on abandoned fields. This work was supplemented by the setting out of longleaf seedlings at intervals among the saplings. Thus, when the less valuable trees have attained their growth and have been taken to market, a good beginning for longleaf will be under way.

The most important step, however, in the accomplishment of the ultimate aim of the owners of the property—to plant within five years 5,000,000 trees on 5,000 acres—was the establishment of a nursery for growing the seedlings. L. J. Leffel-

man, an experienced forester, was placed in charge of the work. Assisting him is Earl J. Troublefield, also a graduate forester.

The nursery is situated on an ideally drained hillside, surrounded by trees and accessible to an adequate water supply. At the end of the first year 100,000 longleaf, 250,000 slash, and 220,000 shortleaf pine seedlings, grown at the nursery, were set out on the plantation. Beside this, thirty acres, at a total cost of \$3.50 an acre, were planted with forest-pulled white ash seedlings salvaged from swamp lands on the plantation. Slash was used on swamp margins; shortleaf on rocky hillsides and in the swamp; and longleaf was given the choice situations on abandoned farmlands and in flat cutover areas. Early this spring the size of the nursery was trebled to make possible the transplanting of 1,500,000 seedlings this fall.

Seasons were favorable for the gathering of the local crop of pine seed. Not for many years has the pine mast harvest been so bountiful as it was last fall. Six hundred pounds—enough to make 1,000,000 plants—were harvested in the community. Seeds for another 500,000 plants were purchased from other sources.



The splendid old tree known as the "Spy Oak"—because two Tory spies were hanged there by General Sumter's men during the Revolutionary War. Looking back over more than four hundred years, this tree is nine feet in diameter, and has a spread of one hundred feet.

When the tragedy occurred that resulted in the untimely death of Mr. White everyone wondered if the reforestation scheme might not fall through, or at least be curtailed. That the work has gone on practically as originally planned is a tribute to Mrs. White's perspicacity and breadth of vision.

Not the smallest part of the work of rebuilding the forests is the systematic effort for fire prevention. The method is so simple and yet so effective that it is worth giving in some detail. Along all property lines firebreaks 150 feet wide are plowed and burned off under careful surveillance. Mr. Leffelman estimates the original cost of these at \$10 a mile. Running at right angles to each other, and intersecting so as to inclose tracts of approximately 100 acres, fire lanes fifty feet wide are made and burned over. Along all roadsides, strips fifteen feet wide are made into fire-breaks. It is estimated that the plantation is protected in this manner at a cost of ten cents an acre. These fire lanes or breaks are sowed to cow peas, disked and harrowed twice each year. The peas pro-

vide food for quail and song birds. The green vines and the harrowed ground serve to stop fires. Besides the peas, Mr. Leffelman plants all fire-breaks and ditch banks, as well as some abandoned fields, with partridge peas, benny, kaffir corn and beggar weed—all suitable bird food.

While the primary object of the nursery is to grow pine seedlings for the purpose of reforesting Hillcrest, there are several beds of other varieties of seedlings. Some of these are Norway, Engleman, blue and white spruce, Scotch, red and Japanese pines, larch, cedar of Lebanon, and several varieties of native blooming shrubbery. The value of forests as protection from the ravages of wind and rain was amply demonstrated last year when a windstorm caused the farmers to have to replant much of their cotton. In fields protected by forests it was not necessary to replant.

During the two years of its existence Hillcrest nursery has not been without its trials and discouragements—storms, washing rains, rust, insects, drought. But, in spite of these, the work has progressed steadily and the future promises the realization of the goal set for achievement. It remains for the next generation to see the full fruition of this effort to give back to nature what the vandal hand of man has wasted.

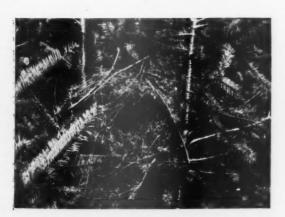
# Transplanting Squirrels and Rabbits

By

#### THEODORE H. SCHEFFER

ONSERVATION of certain groups of wild life in which there is an ever-fresh and happy interest often calls for local redistribution in field or forest. There is an impulse to seek a more intimate contact with the creatures that once, perhaps, enjoyed greater fellowship with us, when the land was new and hearts were young and big business was not so tremendously important. Or the instincts of friendship for them may go even further back to a simpler age when there was less that is artificial and the cock of the dawn had not been frightened from his high perch and privilege by the alarm clock. Anyhow, with the exception of a few of the larger predators, friendly advances to the wild things have always been met more than halfway afield by trust and confidence. Such advances, coupled with gradual recognition of mutual security and benefit, must have brought about in time unrecorded the domestication of the birds and animals we now assume to control by property rights.

It is not always certain that birds, especially those of the migratory breeds, will stay put when restocked in former range or transplanted to new and favorable environment. But in recent years much has been learned concerning their movements, through the banding of thousands of fledglings and trapped adults, thus requiring the individual to report his wild flights. Also it has long been known that



A close-up of the front door-come right in!

food and shelter will go a great way toward inducing birds to stick around the premises or to stake their claims in orchards and parks. And the tribes will increase if the marauding cat can be controlled.

To deal with the smaller mam-



The lofty nest of the California gray squirrel.

mals it is desired to transplant to situations of our own choosing is simpler in practice than to colonize birds. Yet they will require the same inducements to settle—food and shelter, whether natural or humanly provided. Practical suggestions from experience in so handling squirrels and rabbits will be considered here.

The two groups are treated together because the squirrel and the wild rabbit may be taken, handled and stocked in pretty much the same manner, and at the same time if desirable. In general the rabbit's immigration quota is rated low on account of its undesirable habit of barking valuable trees and shrubs, which are harder to grow than rabbits. This makes the animal an unsought tenant for the home premises, the orchard, or the park; but leaves to him freedom of the woods and the open fields, where his numbers may be reduced, to the advantage of the pot, at the season when rabbits are commonly harvested. The federal government has occasionally planted desirable species of rabbits on an offshore island that lacked them in its fauna, and game commissions and private owners of shooting grounds sometimes require

the animals in considerable numbers for stocking purposes. But rabbits should never be stocked in situations where they cannot be easily controlled if they become troublesome. They seldom need shelter other than that which nature offers them in grass, thicket, or stubble and will not need feeding unless it is desired to bait them away from the garden or provide hay for them in time of deep snows.

But the squirrel needs trees, big trees, some of them, with hollows in trunk and limb for security and shelter. In lieu of large trees, shelter boxes should be provided in the more rigorous climates, where the summer nests of leaves are likely to be wrecked by winter winds. And if in any season nature has been scant in providing a supply of mast or other

suitable food for the autumn storing, this lack should be offset by offering corn or nuts. When such donations have been invitingly exposed each squirrel will solve its own transportation and storage problems. For taking either squirrels or rabbits alive and uninjured there is probably no simpler or more efficient device than a box trap. The type illustrated here has been developed after considerable experimenting with different models. Having top-and-end door and wire netting at the rear, this trap is the less likely to look suspicious to an animal

nosing around the entrance. The netting also serves the added purposes of ventilation and of distracting an imprisoned animal's attention from opportunities to gnaw at the cracks in the door. Small mesh poultry netting or that known as hardware cloth may be used. A cupboard catch or similar device will be required to hold the trap shut after it has been sprung and a slide covered opening in the front end of the trap will facilitate release of the captured animal without need to handle or unnecessarily frighten it. This latter consideration is important, for occasionally the captive will die from shock or from a complex of mental strains that are said to rupture the auricles of the heart.

Placing the trap on location will test the trapper's knowledge of woodcraft. In general, favored resorts of the rabbit may be known by the tracks, the droppings and the beaten trails; while the squirrel's favorite haunts are more often located by discovery of the much-used lunching places or the bulky nests in the trees. Stalking squirrels through depths of the woods in the morning hours or late afternoon and evening

is a happy pursuit if the intent is good toward all creatures encountered. There is no better bait for both squirrels and rabbits than a piece of fragrant, tasty, apple impaled on the end of the trigger stick, with bits of the peeling scattered through and outside the trap as an inducement to stop, sniff and enter. It may be expected that others than the invited guests will be attracted to the baits—birds, particularly, during daylight, and at night almost any of the smaller woods prowlers, including mice and skunks. For this reason it is best to keep the traps closed at night when squirrels are wanted—except in the case of flying squirrels—and shut in the daytime when one is trying for rabbits.

When captured, the animals should be transported as soon

as practicable to the place where they are to be released, either in the trap itself or in a crate adapted to the purpose. Such a crate may be an egg case, which is easily procured anywhere. It should be light in weight and strong. It must be lined with small mesh poultry netting to prevent gnawing at the wood of top, bottom and sides, and may have a slide covered opening at the end similar to that in the trap. When the partition is left in, two squirrels or rabbits may be accommodated in one crate. For be it known that however gentle and cunning may be these and



Popular lunch counter of chickaree—where scales of the fir cones he has busily demolished have accumulated to a depth of more than a foot.

other little heroes of the bedtime stories, they will often fight desperately in their common fear when together. An apple box, also easily procured, will serve when lined with the wire netting as a shipping crate for one animal. Both kinds of crates will be sufficiently ventilated at the cracks, and will sometimes need to be covered on top with porous sacking for the greater protection and seclusion of the timid animals. When squirrels or rabbits are to be transported any considerable distance a little dry litter should be placed in the bottom of the crate and food of a succulent nature, as apples or lettuce, must be provided for them. Water will not be needed for a trip of less than a week's duration.

Probably no type of wild rabbit except some species or subspecies of the cottontail, Sylvilagus, will be considered for propagating on new or depleted range in this country. Species of the varying hare, Lepus, have been placed on islands off the coast of Alaska, however. Many biological blunders have been made by pioneers and navigators through the practice of stocking breeds of the domestic rabbit or hare in locations

where they have since become very troublesome. Several species of the squirrel family may be used to stock groves, larger tracts of woodland, or parks. One of the most adaptable, more frequently placed on landscaped and recreation grounds, is the eastern gray squirrel, *Sciurus carolinensis*. The fox squirrel, *Sciurus niger*, of the Mississippi

Valley and the South, is a larger and more attractive squirrel than the eastern gray, having a pleasing variation of color patterns in red, buff and black. It should be better protected in its native range, in some parts of which it is getting alarmingly scarce. As a game squirrel for private or restricted public shooting it has no equal. Farther west there is that beautiful type of gray squirrel, Sciurus aberti, known to the Grand Canyon country. It is chestnutcolored on the back,

gray with black stripes on the sides, and pure white on the under parts. Whether it will thrive at lower altitudes or in other environment we have yet to learn. Farthest west is the California gray squirrel, *Sciurus griseus*. It is also larger and handsomer than the eastern gray and has a tail that may be fluffed out to screen or protect the entire body. The food of this squirrel consists mainly of acorns and the seeds of

of central and western Washington. been no report of this damage to coni

All unaware, wild rabbits and squirrels are taken in these box traps, made of converted egg cases.

conifers, but in the northernmost part of its range it has learned to subsist on the bark of trees in late winter and early spring. This regrettable habit makes the presence of the species objectionable in the parks and on landscaped grounds of central and western Washington. Farther south there has been no report of this damage to conifers and maples.

It remains to be said. apologetically, that any kind of tree squirrel will sometimes disrupt the housekeeping arrangements of nesting birds; a tragedy in itself, but one that cannot always be circumvented in nature. The small red squirrel, or chickaree, is reputed to be the worst offender in this respect. Otherwise he is a bright and handsome little fellow and audacious to the last degree.

Chipmunks and the mantled ground squirrels, Callospermophilus, are attractive and

interesting little companions about the camp or the home grove. They must be provided with such shelter as will enable them to hibernate in the colder season.

In conclusion, it should be remembered that some of the squirrels are protected by law in certain states and must not be taken in the wild or transported except in full compliance with such regulations.

### Michigan's Game Dog

(Continued from page 623)

This indicates mating and possibly nesting, as frequently pheasants start their clutch early in April and perhaps before. It is obvious that some change occurs at this time which makes the bird immune to pursuit. It is difficult to determine the nature of this protective change and to tell for a certainty whether or not it occurs before nesting begins or simultaneously with it, but its consistency at this early date indicates that it began before actual nesting.

Pairing in bobwhite was first observed on March 27 but the birds were handled by the dog with no apparent difficulty although they were located within light cover, and their activity could be readily observed. Later in the season he ran by the paired birds repeatedly. Three flocks of quail which were still being fed at a feeding station on April 26 had not paired and these were successfully handled by the dog. This apparent loss of the bird's scent, which may affect other mammals as well as dogs, is apparently a remarkable protection during the nesting season to game birds and probably also to other groundnesting birds.

Max Berry went through the winter in excellent condition without a sore foot or an off day. His daily rations when in the field consisted of one pound of finely chopped meat fed as soon as we reached the garage where he slept in the car at night. He was always provided with a dish of water at this time. When off duty his diet was changed to the regular home dog's meals of table scraps. The diet used is probably not ideally suited for such intensive work during summer or in a warm climate, but it was entirely satisfactory for this dog under existing conditions. He was always permitted to ride in the car during this investigation and not on the running board as has been reported.

Mention should be made of one factor in the use of Max Berry for this investigation that every true dog lover will keenly appreciate. He was companion second to none, always faithful, enthusiastic and friendly. I advise all men undertaking a long and strenuous field investigation which will tax the vigor of the strongest to seek the companionship and assistance of a good dog.

# The Hall of Fame for Trees

## THE LINCOLN MEMORIAL TREE OF

Preceding his nomination for the presidency Abraham Lincoln visited Kansas, and today a beautiful elm tree stands at Atchison as a living memorial to that visit. It was there that the great emancipator made his most elaborate speech in Kansas, on the evening of December 2,

A small Methodist church, newly erected, was secured for Lincoln, and upon his arrival the building was filled to overflowing. Both doors of the church were open and all the windows

The little church in which Lincoln spoke was torn down ten years afterwards, but the tree, now developed into a magnificent specimen of the American elm, has been carefully preserved. Today it stands on the lawn of H. B. Mize and a granite boulder at its base bears a bronze tablet, a gift of the Daughters of the American Revolution, commemorating the occasion.

The tree was nominated for the Hall of Fame for Trees by Dr. Edward Bumgard-

ner, of Lawrence, Kansas.

#### THE COUNCIL OAK

Great, old American tree citizens, landmarks of the Santa Fe Trail, the trees pictured on the following page have been nominated for the Hall of Fame for Trees of The American Forestry Association by Barbara Bayne of California, tree historian.

Left: The Kansas Lincoln Memorial tree as it appears in

Below: The famous tree in summer time, in full foliage.



were raised, despite the December weather. Hundreds of men, unable to gain admittance, crowded around the building hoping to hear at least a part of the speech.

When it was suggested that Lincoln stand where those outside might hear to better advantage he mounted a chair in front of one of the open windows, and from this small platform spoke for two hours and twenty minutes. In the yard near this window stood a small elm tree, around which was gathered an audience larger than that mside the church. Twice Lincoln suggested that he was speaking too long and that he should stop, but was urged to continue.





# The Hall of Fame for Trees

The Council Oak is one of the historic landmarks of Kansas, and around it more than a century of romance is woven. The great event fixing the place of this tree in history was the council held beneath its branches in establishing the trade-route from the western frontier of Missouri to Santa Fe, New Mexico. In June, 1825, President John Quincy Adams appointed three commissioners to treat with the Indians for the right-of-way through their territory, for which on August 1, 1825 \$800 was paid the Osage Indians. The tree is a burr oak, and except for its girth measurement is much the same today as given in the records of the 1825 survey of the old Santa Fe Trail. Its height is 70 feet, its circumference 16 feet and the spread of its branches 60 feet. Estimated to be three hundred years old, it is still in a splendid state of preservation. It stands in the garden of C. W. Crim, in East Council Grove.

#### THE CUSTER ELM

This great elm tree, whose age is estimated at three hundred years, is one of the most imposing landmarks on the old Santa Fe Trail. It looks today very much as it did in the early summer of 1867 when General



The Council Oak



The Custer Elm

Custer, with the famous 7th Cavalry, later annihilated in the Battle of the Little Big Horn, camped beneath its sheltering shade. It is 110 feet in height with a circumference of 24 feet and a branch spread of 90 feet.

#### THE "POST OFFICE" OAK

The Post Office Oak, faces the old Santa Fe Trail and is located just a few feet over the line from Madona Park, at Council Grove, Kansas. Its age is estimated at about three hundred years. This Oak is unique in the annals of the old trail. Its historical significance antedates that of the Council Oak. When the hunters, trappers and scouts followed dim trails into the solitudes of the Southwest, and danger lurked at every turn of the trail, these men established a cache of stone, buried at the base of the tree where those who followed found messages and information.

- The Post Office cache was used by the overland travelers until 1847. The Post Office Oak measures 80 feet high; circumference 14 feet; spread of branches 80 feet.



The "Post Office" Oak

## Wild Burros

By

WILL C. BARNES

OSTORY of the western stock ranges would be complete if one left out of the picture the humble little ass which, according to the Bible, held quite a conversation with one Balaam; and about which animal Job—he of the boils and other tribulations—asks rather petulantly "who hath loosed the bonds of the wild ass?" (Job 39:5). This animal in later years became the long-eared friend and fourfooted transportation system of the desert prospector and the southwestern sheep herder.

Unless one has seen the burro in action, one must have imagination plus to visualize as "wild" these plodding, phlegmatic, little animals. Domesticated, the burro is the epitome of suspended motion—a veritable "slow movie." Haste is something unknown to them. Speed is a word not found in their vocabulary.

Nevertheless, every cowboy admits that roping a wild burro is almost an impossibility, an accident rather than

expertness and skill. "You can waste a wagon load of loops and never catch a single

burro," is the unanimous report from men who will gamble heavily on their ability to catch calves on the range at the rate of four to every five throws. It is not so much the speed these "wild asses" can show as it is their keen ability to dodge the flying loop. A



"Howdy—I'm just three days old!"

horse in running from a rider simply stretches his long neck, flattens his head and devotes himself strictly to the business in hand—that of developing all the speed he can. The burro, however, no matter the rate of speed or the character of the ground, keeps his head waving from side to side, always alert, at least one eye on the job. He watches the whirling rope and easily dodges the loop. Far more sure-footed than the horse and with hooves of steel they race over rock slides or down precipitous canyon sides at frightful speed with

seldom a misstep or a fall.

Once in Arizona a band of a
dozen wild burros tear-

ing madly from their pursuers dashed down the steep sides of a canyon covered with loose rock. In their dive for liberty they failed to see ahead of them a ledge, the edge of which was more or less concealed by low bushes. It was a straight drop



An Arizona sheepherder and his transportation facilities.

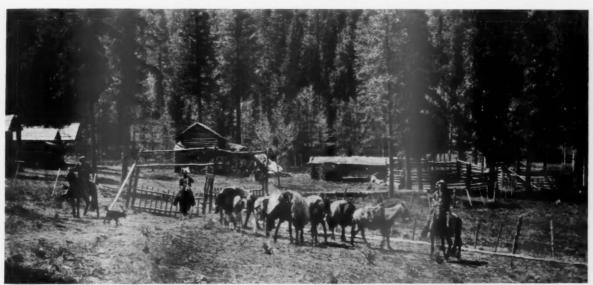
of nearly a hundred feet and every animal went over that cliff to his death, accompanied by tons of loose rock, a funeral cairn that will outlast the ages.

The Grand Canyon of the Colorado River in northern Arizona was at one time a favorite region for prospectors, affording vast opportunities for investigating the mineral possibilities of the region. In the winter when the country on top was many feet deep in snow it was springtime in the canyon. Down the rugged cliffs the miners forced their pack burros and once in camp at the bottom the animals were turned loose to shift for themselves. In many instances they could not be found when the "desert rats" decided to "go on top." Thus it came to pass that as early as 1884 small bunches of these animals were seen here and there, wilder

Various methods of disposing of the burros were suggested. Poisoned grain and salt placed at strategic points offered a fairly easy way and those not so caught could be picked off by sharpshooters with "silencers" on their rifles. Whatever method was followed it was carried out in the quietest manner possible. They weren't hungry for publicity.

Somehow or other the thousand or more wild burros that ranged through the vast depths of that section of the Grand Canyon faded away like the snow in spring. One day there arrived at the canyon a shipment of antelope and mountain sheep from Yellowstone Park which were turned loose to restock their former ranges.

Knowing ones put two and two together and guessed what had happened. Everyone had agreed as to the futility of turn-



A pack train leaving a western ranch-the endurance of the burro as a pack animal is unexcelled.

than the wildest deer and climbing the rugged sides of the canyons with the ease and dexterity of the big horn sheep, which, by the way, in the early days were common through the canyon.

These lost burros increased rapidly and although Indians killed many for meat by the time the federal government created the Grand Canyon National Park there was estimated to be more than a thousand of them running wild within the park boundaries, a comparatively small section of the canyon. At first a matter of interest to tourists visiting the canyon, they became in many ways a real nuisance. Moreover, they had driven out all game animals. So it was decided to get rid of them. This decision, however, was not broadcast to the world at large. Those government officers had had an experience with disposing of wild horses by means of rifle practice not many years before which had brought down upon them the wrath of many well-intentioned but decidedly sentimental persons, who, not understanding the difficulties of the situation, protested loudly. Their protests were directed against such a murderous attack, as they put it, upon what they alleged to be man's best friend—the horse.

ing antelope or mountain sheep into the canyon as long as the burros held possession. Ergo, the burros must have been eliminated. There are still wild burros in other sections of the canyon and this summer in Kansas an automobile coming from the Grand Canyon carried in a small crate on the running board a baby burro trapped in the canyon by an Indian and sold to the tourist as a "souvenir." The little chap was doing famously and seemed to be enjoying its unique voyage into unknown lands.

There will always be a few wild burros in the rocky depths of the Grand Canyon, but it is doubtful if ever again they increase to such numbers as existed there a few years ago. The antelope and mountain sheep are far more picturesque.

There are many hundreds of wild burros on the National Forests in the Southwest, where they range in rough areas on which no other domestic animal could find a living or a footing. Several years ago on the Sitgreaves National Forest, in northern Arizona, they had become a pest, especially to the sheep herders who were constantly losing their tame pack burros which ran off to the wild ones. A grand burro round-

up was staged by forest rangers, assisted by about every ablebodied cowboy, sheep herder and rough rider in the region.

By means of "trap corrals," crowding them up against the edges of deep canyons and then roping them, running them down on the flats with good swift horses, they secured about 400 head at a cost in time and horseflesh far above their market value. But getting them off the ranges was considered well worth the cost.

Old-timers expressed the belief that never before in the history of the West had so many burros been seen in one bunch. Turned over to the state authorities to be disposed of under the law, some were claimed by owners under their brands, but about 375 were sold at auction, the whole lot bringing an average of \$1.50 each.

The purchaser was a local butcher who bought them to kill

and feed to his hogs. They were driven to the town in which he operated where he had the time of his life standing off Mexicans who swarmed about the corral claiming certain animals in the lot by brands, earmarks, old pack scars and personal acquaintance. Many he sold outright and the Mexican portion of the town was soon decorated with long lines of "jerky" hanging all over the place.

Also regularpurchasers of hot tamales, made and sold by Mexicans, positively refused to indulge in those delicacies as long

as the supply of burros held out. It is well to remember, however, that travelers tell us that "the wild ass is accounted the noblest game animal in Persia and its flesh is prized as is venison with Americans."

Humble and patient plodder though he is, the male of the species is about the pluckiest, most determined little warrior known to man when his warlike passions are properly aroused. Between him and the wild stallions of the open ranges there is a perpetual and deadly warfare. To meet is to fight, and generally the fight is to death. Once a jack burro with a small harem of mares at his heels entered the gate of a trap corral set to catch wild cattle. Inside this particular trap corral was a young stallion with a bunch of wild mares that had come through those curious deceitful gates which opened only inwardly, to reach the salt placed there to entice them into captivity. For an hour or more the sturdy little jack and that active young stallion fought like nothing else on

earth can fight. With their teeth they tore great pieces of flesh from each other's forelegs, necks and breasts and often they were locked in a deadly grip for five minutes at a time, the teeth of each sunk deep into the flesh of his enemy. The throat is the main point of attack and when the burro finally managed to seize his enemy on the under side of his neck where the throat joins the head he hung on with a bull-dog grip from which the horse could not free himself. Ten minutes later the horse sank slowly to the ground, soaked with the blood of both, gave one groan and was gone. The burro, bleeding from a dozen frightful wounds, staggered back to his little family that had watched the terrible combat with idle interest, gave one exultant but somewhat uncertain "heehaw" and followed his late enemy up the long trail.

One recalls a Mexican sheep herder wrestling with a burro

packed with 200 pounds of salt. Tiring of carrying the load the animal is flat on his side in the middle of an ice cold stream, refusing to make a single movement toward an upright position. At such times one is impressed with the scarcity and total lack of satisfactory expletives in the English language when compared with those long sonorous objurgations, maledictions and "cuss" words with which the Spanish language is so plentifully supplied.

It is a common saying throughout the

West that "nobody ever saw a dead burro," the natural deduction being that burros never die. Doubtless this is due to the fact that they are not so numerous as are other domestic animals. The burros of today are the descendants of animals brought to this country from Spain by the Spanish Conquistadores who in March, 1519, under Cortez with "four vessels and several open brigantines and caravals," unloaded near the present city of Vera Cruz, Mexico, supplies and stores for his expedition in the new world. Part of the cargo consisted of a number of saddle animals, mares, geldings and stallions, all of them being landed on the beach without accident or loss. Other like shipments came later. Unquestionably mules and asses came also with these expeditions, for both were in common use all over Spain at that time. The presence of these animals with the Spanish armies excited wonder and fear among the American Indians who knew nothing at all of such beasts, for previous to that date horses, cattle and mules were unknown on the American continent.



The burro, thoroughly domesticated—an epitome of suspended motion—is the pony of the western boy.



## **EDITORIALS**

### Taking the Red Out of Fire

THE Forest Service released late last month its compilation of forest-fire statistics for 1929. From the maze of figures compiled, giving in detail the fire record by states, groups of states and for the nation as a whole, the ugly fact protrudes that forest fires in this country are still on the increase. A total of 135,000 fires in the woods, 46,000,000 acres burned over and tangible damages of \$102,000,000 is 1929's fire record reduced to three major counts. In point of area burned and damages resulting, the record exceeds that of any of the preceding three years.

Red though the picture is, it is not without a redeeming feature. Of the total number of fires in 1929, two-thirds occurred on unprotected areas. Six-sevenths of the damages occurred on unprotected lands and of the 46,000,000 acres burned over, 41,000,000 acres, or ninety per cent, were in regions receiving no organized fire protection. One might conclude that the importance of this comparison could be discounted by a much larger area of unprotected than of protected forest land. The reverse, however is the case. The total forest area in the country receiving some form of protection amounts to 399,000,000 acres, or 67 per cent of the

total area in need of protection. In brief, organized protection held fires on two-thirds of our forest estate to less than 5,000,000 acres, while lack of protection on the remaining one-third gave play to fires burning over 41,000,000 acres.

The comparison is striking and of tremendous significance. It drives home the fact that organized fire protection gets results. That it pays seems abundantly proved by the fact that out of total fire damages of \$102,000,000 in 1929, \$88,-000,000 occurred on unprotected forest areas which comprise only one-third of our forest lands. Thus organized fire protection takes the red out of forest fires in more ways than one. The bulk of the organized protection has come through the Clarke-McNary Act which during the past six years has put into operation a cooperative effort by states, federal government and private individuals that has extended into every forest region in the country. It is holding fires on protected areas to around one and one-half per cent of the area while regions receiving no protection are suffering yearly a twenty to twenty-five per cent loss.

It would be difficult to find a stronger argument for rapid expansion of the Clarke-McNary effort to forest lands not now receiving protection.

## Conservation and Federal Reorganization

EWSPAPERS of September 6 carried an Associated Press dispatch to the effect that the Interior Department "seems to be working itself out of a job" and "should have more work to do" and, the dispatch continued, "the vast area west of the Ohio River is disposed of save for a few patches of desert and rocks." There followed in conclusion the suggestion that "some sentiment exists for transferring to the Interior Department the Forest Service and the Biological Survey of the Agricultural Department because of their relation to the National Parks and public lands."

The conservation of plant and animal life demands the widest application of the principles of biology to the origin, development, structure, function, and distribution of these living organisms, and the phenomena accompanying their life and reproduction.

In the Federal administration such work is the major purpose of the Department of Agriculture—the husbandry of the soil and its organic products for the sustained production of food, fibre and other values of plants and animals. There is logically grouped in this department the Forest Service and the Biological Survey, in intimate association with the Bureaus of Soils, Plant Industry, Plant Pathology, Entomology, Animal Industry, Agricultural Economics, experiment stations—all engaged in the work of the biological sciences.

The mistake is commonly made of thinking of the Forest Service only in terms of the public lands which this bureau administers as National Forests. The work of the Forest Service is nation-wide. By mandate of Congress research is conducted in experiment stations and laboratories established throughout the country; surveys and economic studies carried on; and cooperation maintained with the states and private agencies in the production and utilization of forests as a permanent resource of the soil in complement to agriculture. Likewise, the work of the Biological Survey extends beyond the boundaries of game refuges, for this bureau is responsible for the investigation of the relation of wild birds and animals to agriculture and stock raising with a view of the control of the harmful and the conservation of the useful species.

The National Park Service has little in common with other bureaus in the Interior Department. Its relations with the bureaus of the Department of Agriculture on the other hand are naturally and in fact close. And this is because the natural plant and animal life resources of the parks, though set aside as permanent exhibits, of course, live and die like other organic elements. Their management, therefore, for continuous production and maintenance is a biological process that transcends in fundamental importance any other phase of park administration. Many of the parks too have their boundaries in common with the National Forests and often there is a mutual interest in fire protection, combating insect invasions and plant diseases, and in the protection of wild life.

The public lands under the administration of the General Land Office are not under management. The primary function of the General Land Office is not the conservation of the natural resources of the public lands but their disposition for development by private enterprise under the various land laws, or their dedication to public service in reservations under the management of other bureaus.

This is a fleeting function although it may be pointed out that the fundamental problem of the "few patches of desert and rocks" (they amount to approximately 190,000,000 acres) now remaining under the jurisdiction of the General Land Office is not one of mere disposition of real estate but essentially one of conservation—the recovery and maintenance of plants and forage grasses for economic use, protection of water flows, and the curbing of soil erosion. This is a work intimately related to agriculture.

There are other bureaus engaged in the administration of natural resources which depend upon the biological sciences the Bureau of Fisheries in the Department of Commerce and the Alaskan reindeer section in the Bureau of Education in the Interior Department. These together with the Forest Service, the Biological Survey and the National Park Service have a common major purpose, and that is the conservation of natural plant and animal life for sustained production, material use and spiritual enjoyment. The inter-relation of these bureaus is necessarily close and they form a natural group of administration. If the now vacant public lands are put under range management the bureau of administration will obviously form a logical part of this same group.

The Department of the Interior has no major purpose in administration as now organized. Recently the Patent Office, the Bureau of Mines, and the Pension Bureau have been transferred to other departments. There yet remains such diverse activities as the administration of social services, the preservation of natural plant and animal life, engineering functions and public works, and the adjudication and disposition of title to the public lands.

It would seem reasonable to continue the process of allocation of functions to more appropriate agencies of administration which now exist, such as the Departments of Labor and Agriculture, and the set-up of a Department of Public Works to bring together the functions of construction now scattered in several departments.

In any case it has been well said that intelligent consideration of proposals of reorganization require more than familiarity with general principles of administrative reform. It calls for sympathetic analysis of the purposes which units of administrative machinery are established to serve and of the practical functioning of existing machinery. An inquiry undertaken in this spirit will be productive, and should point the way to the orderly administration of federal affairs, the necessity for which has been emphasized by President Hoover.

#### Forestry in Arkansas

THE letter from the Secretary of Agriculture to the Governor of Arkansas, referred to in this issue of the magazine, is a remarkable example of one of the indirect results of the Clarke-McNary law. Acting under authority of that law the Secretary of Agriculture headed a request of the Governor of Arkansas and sent a forester into the State to study its forest conditions. Upon the even of the publication of the forestry report the Secretary called it to the Governor's attention and earnestly recommended the organization of a State Forest Service. He urged that a competent forester be placed in charge and that the service be provided with adequate funds for carrying out a plan for protecting the forests of Arkansas from fire. The Secretary implied that the federal government stands ready to cooperate with the State in carrying out its forest protection plan.

The Secretary's letter is directed toward the coming session of the state legislature which convenes in January. At that time a forestry bill will undoubtedly be considered. This is not the first effort on the part of forestry minded people in Arkansas to pass a forestry law. It has been an item for

discussion during several previous sessions of the State legislature and every time has been defeated.

Fear and lack of public faith in the lumber industry of the State were undoubtedly at the bottom of the defeat of the bill. The fears are groundless and the lack of faith on the part of some of the legislators is apparently a hang over from the old days of ruthless lumbering. Under present conditions the leading lumbermen of Arkansas are men of unusual public spirit. They are carrying out plans on their own land which include many of the principles that foresters have long recommended. An organization of a few timberland owners known as the Arkansas Forest Protective Association is making a successful effort to protect from fire more than 4,250,000 acres of timberland. Aside from the land in the two National Forests and the National Park, this is the only considerable area out of twenty-two million acres of forest land where any real effort at forest protection is being conducted. These lumbermen deserve the faith of the public. They should have full support in the form of helpful state forestry legislation.

# The Realization of a Dream

In Which Uncle Sam is Reclothing the Slopes of Pikes Peak With Trees

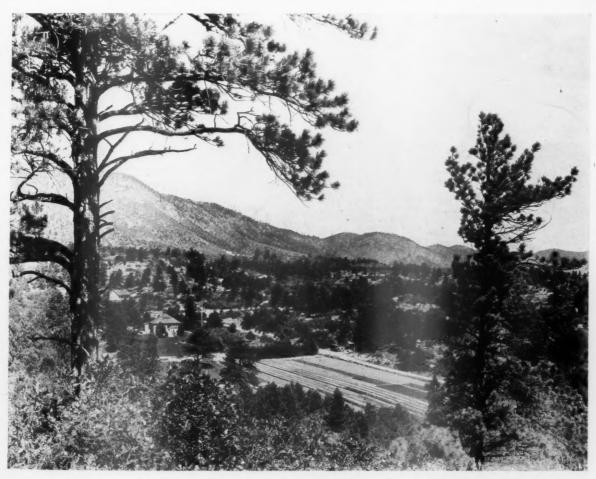
By Smith Riley

HEN large portions of the forest areas of the public lands were set aside as National Forests every conceivable condition existed relative to the character of the tree growth. There were districts of virgin growth, together with areas from which the trees had been removed with little thought of the future uses to which the lands would or could be put. There were areas from which the growth had been swept by fires, burning repeatedly over long periods and bringing about changes in the composition of the soils unfavorable to tree growth.

In developing the policy of reconstruction it was necessary to pick out the locations where the destruction of the forest cover had been most keenly felt.

Human activities in the immediate vicinity of Pikes Peak had made much use of the forest growth on the mountain slopes. The mining industry of the Cripple Creek district had taken heavy toll of the trees. When their passing was making an impression there was little thought of the possibility of perpetuating the cover. It required firm convictions and a stout heart to advocate the planting of trees requiring eighty or one hundred years to mature in the interest of the mining industry.

The development of towns, likewise, had made demands upon the slopes of the mountain for water. These demands increased at such a rapid rate that the available water supply was entirely utilized and means were being sought to augment it. After a thorough study reservoirs were established in every locality offering conditions for successful results. The unprotected soils on the steep slopes silted the reservoirs,



Here millions of trees have been grown from seed for planting on the baid slopes of Pikes Peak and in the National Forests of Colorado. The nursery is located a short distance from the small town of Monument.

lessened their capacity and involved an item of expense in the constant removal of the accumulation. Of course there were those who were convinced of the value of forest cover in creating conditions suitable for the absorption, holding and gradually giving off the flow into the streams.

This interest in the value of forest as a water conserver resulted in the selection of the slopes of Pikes Peak as the location of a planting project. The first nursery site was chosen at an altitude in keeping with the area to be planted. This proved a mistake, as it was impossible to work the nursery soils and have the trees ready for the field as soon as the frost was out of the ground in the spring. A suitable site was chosen at a lower altitude where the growing season was longer and the frost out of the ground in sufficient time to make possible the preparation of the trees well ahead of favorable planting conditions on the mountain slopes. Limited funds were available for work of this kind and there was little general support calculated to stimulate its progress.

One of the principal factors in the success of this project has been the production of trees at the Monument Nursery. The preparation of the beds, fertilization, the sowing of the seed, shading the germinating seed and the small trees, have required constant effort. Protection for the small trees in the nursery beds was necessary in winter, so oak brush was cut from the surrounding slopes and used to create this protection. Mice were attracted to this shelter and would burrow in the ground and injure the trees or eat the seed. Fungus and disease cause losses, that if not checked, curtail the stock available for planting and increase the cost of the trees available. All these factors required constant vigilance on the part of its promoters to prove the nursery feature of the project practicable and a success.

Any expenditure to reestablish forest growth was looked upon by many as an unwarranted expense. The visional uses which the trees would serve, and the long period required to bring the trees to a merchantable size made it essential to keep the costs of the operations at the minimum. Many of the slopes to be planted were steep and without cover to serve as a protection to the small trees until they had become established. The soil for the most part was composed of coarse disintegrated granite which was constantly on the move to the lower levels through the action of frost and floods created by rapidly melting snows or tor-



Some of the transplant beds in the Monument Nursery, showing the small trees of different kinds. The "2-1" spruce sign means the trees have been two years in the seed beds and one year in the transplant beds.

rential rains during the summer months. Small trees placed in a normal position on these moving slopes were pushed over and drifted under by the soil. This was a difficulty to be overcome and it was found that sturdy trees set with their boles at right angles to the slope were able to maintain their position and gradually grow erect as the soil moved steadily around each side, rather than against the small hole.

The species used are Douglas fir and Western yellow pine with Engelmann spruce on the higher slopes. These species made up the original forest and appeared best suited to the different exposures and soil conditions found at the different altitudes.

To the American, with the atmosphere of desire to reach an objective in the shortest space of time possible, the minute size of conifer trees from two to four years old appears a never

ending source of disturbing cogitation. The late Clifford R. Pettis once told of a governor whose activities grew out of a trip to the nursery near Clear Lake. He pointed to the beds containing two-year-old pine, and asked Mr. Pettis why so much space was given to raising grass. When told that what he designated as grass were millions of little trees, the Governor, prompted by his discomfiture, evinced an interest and acquired a knowledge that became beneficial to the forestry movement in the State. Several of the Pikes Peak plantations are along the Pikes Peak Highway. When the trees were small a party of State officials stopped their cars near a grassy slope and had an enjoyable lunch. During its

progress the conversation turned to the improvement of the general surroundings by the establishment of trees. Someone said the national government had been planting trees and asked where they were. A forest ranger who happened along just then pointed out that members of the party were seated on several of the trees.

In making plans for the early plantings it was considered

necessary to plant the trees with spacing to result in stands of ample density after a fairly heavy loss had taken place through the extremes of temperature, dry winds, and a lack of moisture in the soils. The losses have not been as heavy as expected and recent planting reports from the Pikes Peak National Forest emphasize the advisability of removing a number of the trees from the plantations so those remaining shall have the growing space



In the natural course of events, conifers would have covered land of this character after a long period of time but they have been rendered productive by planting to yellow pine.

necessary to full development. What is the future of these trees on the slopes of Pikes Peak and what values may they represent to the generations as the years come and go? They have demonstrated the practicability of establishing stands under adverse conditions of climate and soils. They have demonstrated the possibilities of improving the cover as a measure of stabilizing stream flow; they will give shelter and food to many different kinds of animals and birds; valuable to those attracted to the region as teachers of the intricate ways of nature. Time only can reveal the fullness of their position on the slopes.

## SOLITUDE

I bid farewell to the city and give in exchange for its stone temples the silent hills; for its rivers of humanity, the streams that flow through the green valleys; for its lamp-posts, the hemlock, spruce and pine; for its dusty lindens upon the boulevards, the shimmering, zephyr-swept maples; for its man-made monuments, the rough-hewn boulders on every hillside; for its voices, the whispering echoes of the forest; for its avenues, the open road winding over the forested hills into the deeps of the woodland; for its greetings I exchange the song of birds; for its churches, the cathedral of the pines; for its fame and applause—solitude.—Selected.

# Five Million Walnut Trees

Boy Scouts to Perpetuate Historical Nut Trees of Nation By C. A. Reed

This is the first of a series of articles to appear in American Forests and Forest Life dealing with historical black walnut trees and the Nut Seed and Tree Planting Project of the Boy Scouts of America, of which The American Forestry Association is a sponsor. The author is Associate Pomologist in the Bureau of Plant Industry, Department of Agriculture, and one of the foremost nut culturists in the country. His next article will deal with the known historical black walnut trees in America.—Editor.

PIVE million walnut trees, scions of the aristocracy of the American tree family, will be growing throughout the nation by 1935. This forest of trees, planted by the Boy Scouts of America in cooperation with the United States Department of Agriculture and The American Forestry Association, will rise from walnuts selected from the famous native trees at Mount Vernon, Arlington Cemetery, Valley Forge, Gettysburg, and other historically sacred spots.

They will be distributed throughout the nation and planted at the rate of one million a year for the next five years.

This new program is the outgrowth of an activity carried on by the Boy Scouts since 1926. For the past four years they have been gathering and planting black walnuts from America's historic grounds. For a longer period they have gathered and planted walnuts from a tree near the grave of Theodore Roosevelt, at Oyster Bay, Long Island. It is to further this forestry activity of the Boy Scouts that the new fivevear project has been evolved and a fund of \$10,000 raised.

The first plantings under the new project will be made on camp grounds owned by the Boy Scouts and in public parks and school grounds, but as the project expands it is proposed to give every Scout in the country whose home facilities permit and where environment is favorable one of these historical walnuts to plant and raise as his own. Eventually, it is expected that plantings will extend to thousands of acres of farm land which would be made more valuable by plantings of black walnut trees than by continued use in ordinary agriculture.

Under the project plan Boy Scout troops in different

regions will locate bearing nut trees on historical locations, such as Lincoln's old home and Washington's birthplace. gather the nuts in the fall of the year and ship them to the Experimental Farm of the United States Department of Agriculture at Arlington, Virginia, where the nuts will be hulled, sorted, graded, and tested. The nuts will then be allotted to Scout troops in regions in which the trees are best adapted, and planted under prearranged local planting plans. Prepared instructions for harvesting, packing and shipping the nuts and information on planting and caring for the young trees will be made available for the Scouts.

The black walnut has been chosen for use in this project because it serves more purposes and is capable of being grown



One of the famous black walnut trees at historical Mount Vernon, the nuts of which the Boy Scouts gather annually for planting throughout the country.

the United States. Its timber value is greater than that of any other species on the market, either home grown or im-

ported, black walnut lumber having always been the favorite in American cabinetmaking.

Black walnut trees are among the country's most satisfactory ornamentals, especially when so grown as to retain their foliage until the end of the normal growing pe-



Missouri boys receiving black walnuts from Mount Vernon. These were planted on the grounds of an orphanage.

riod. In size, they run a close second to the pecan as becoming America's largest growing hardwood east of the Rocky Mountains. In time of war, black walnut immediately assumes a commanding lead in importance for military use. Every nation in the world knows that American walnut makes the best material for gun stocks.

This planting project is in full harmony with the general

on a greater range of territory than any other one species in outdoor program of the national scout organization under the capable direction of O. H. Benson, Director of Rural Scouting. Also, it is in full keeping with the work of The

American Forestry Association, in its encouragement of planting, loving and using suitable trees. The American Walnut Manufacturer's Association, a business organization, is lending support for no less practical a reason than that unless black walnut trees are

planted by the present generation, later generations will be hard put for black walnut lumber. The Department of Agriculture, charged by Congress with the duty of looking after the welfare of the people of the country in every way possible, insofar as it pertains to agriculture, is interested for many reasons. The country must have trees and the conspicuous leadership of the black walnut in tree usefulness is



Young walnut trees from the grave of Theodore Roosevelt at Oyster Bay, Long Island, being distributed to a Boy Scout Troop at Tacoma, Washington, for planting.

ample reason why its planting should be encouraged. From the educational standpoint, the teaching of the youth to plant, grow and own these trees, regardless of the intrinsic value of the trees themselves, is immensely worth while. Who knows how many great foresters of the country, both men and women, will owe the foundation for their interest to

this project? The government is doing a wonderful work in its development and preservation of vast National Forest lands, but the people of the country will never have a full appreciation of trees until they themselves plant and have their own trees. The generous patrons who have made the project financially possible have seen in it an opportunity for far-reaching public service by means of a small investment in money.

The origin of the project in this particular form is largely due to the ideas of two men, Daniel Carter Beard, prominently and well known among the Scouts of the country and the late Hon. W. S. Linton, of Saginaw, Michigan. The former is the National Scout Commissioner and an honorary vice-president of the national Scout organization, of which Herbert Hoover is honorary presi-

dent and ex-President Calvin Coolidge, Hon. William G. McAdoo and other prominent men are also honorary officials. Among Mr. Beard's activities on behalf of the Scouts, is his responsibility for the gathering and planting each year of the walnuts from a tree near the grave of Theodore Roosevelt.

Mr. Linton was a member of Congress during Cleveland's second administration and in such capacity became nationally known. His home was in the lower edge of Michigan's great white pine forest region, now probably gone forever. Ardent love for trees was his second nature. For two years he was the honored and capable president of the Northern Nut Growers Association. In 1920, after having presided over an annual meeting of that body held that year in Washington, in company with Mrs. Linton he motored to Mount Vernon, where he was attracted to the black walnuts which were then falling in considerable quantities. Through Col. H. H. Dodge, the local superintendent, he immediately appealed to the Mount Vernon Ladies Association of the

Union, hoping that these nuts might be made available for the children of his neighborhood to plant. This permission was obtained without difficulty, but with the stipulation that the nuts would not be commercialized in any way.

A few weeks later forty bushels of black walnuts in the hull were shipped by express from Mount Vernon to Mr.

Linton. Word was sent out that persons desiring a few for planting on their home grounds might obtain them from Mr. Linton. From that time on until the season for planting was over, Mr. Linton was quite overwhelmed with requests that reached him over the telephone, through the mail, and in various other ways from people for many miles about. "They even came from over in Canada," he told the writer some months later.

Mr. Linton reserved about 2,000 of the nuts for use in the public parks of Saginaw. These were planted in a nursery where they made remarkable growth and two years later they were transplanted.

Mr. Linton fully intended to procure the Mount Vernon nuts and to continue their distribution during later years but his other responsibilities did not permit, so in 1926, the

other responsibilities did not permit, so in 1926, the work was taken up by the Bureau of Plant Industry. The first nuts gathered that year were sent to Hon. Frank M. Wielandy of St. Louis, Missouri, former State Commissioner of Conservation, by whom they were turned over to the boys of the Junior Young Men's Christian Association of that city for planting. Before the end of the season, however, the National Boy Scouts of America took over the project. In 1929, The American Forestry Association and the American Walnut Manufacturers Association joined with the others already in the movement.

The project may be criticized because the nuts are selected for sentimental rather than scientific reasons, but there is small question of the advantage of planting large numbers of walnut seeds. Surely, there is scarcely an American who would not wish a walnut tree from the home grounds of any President of the United States; from such historical spots as Gettysburg, Antietam, Bull Run, or Chickamauga, or from the birthplace of William Jennings Bryan, Uncle Joe Cannon, Champ Clark or some other great American.



R. W. Dunlap, Assistant Secretary of Agriculture, helps Boy Scouts gather the nut crop at Mount Vernon.



Little Stories by the Men of the Southern Forestry Educational Project of The American Forestry Association Who Are Carrying the Message of Forest Protection to the People of the South

THE following letter has been received by The American Forestry Association:

"For the past several weeks I have been intending writing you concerning your second annual report of the Southern Forestry Educational Project. It is a splendid report and indicates clearly that you are getting results. To my mind, 632 motion-picture shows, 343 lectures, 145,655 people attending these shows and lectures, and an additional 414,194 people viewing the exhibits, is a great accomplishment in the field of forestry education. Thousands upon thousands of adults and children have started to think about

forest conservation largely as a result of your efforts and the efforts of your men.—HARRY LEE BAKER, State Forester of Florida.

"There were no buildings in Junction, Florida, large enough to hold the farmers and their families, so I made arrangements to give my lecture and motion picture show in the open. The screen was hung on the side of

the community's one store and the projector set up in the yard. At dusk the crowd began to gather.

"Many of the people who came from this picturesque little piney woods community had never before seen a motion picture—several had never heard of such a thing—so there was considerable interest and excitement. The storekeeper was master of ceremonies, greeting the farmers and their families as they came in, and explaining the wonder of what they were to see. Just before I focused the light on the screen

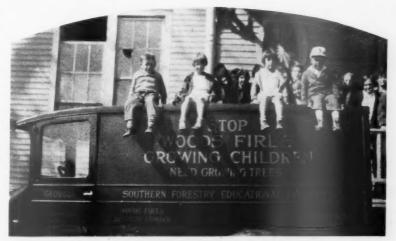
he came up and slapped me on the back. "'Well, young man,' he said, 'there ain't been this many people in Junction since the day George Miller got shot.'

"I started the projector and a great murmur went up as the picture flashed on the screen. Silence followed as the crowd became interested in what was being flashed before them. After the first reel I was introduced by the storekeeper and talked briefly on the benefits of applying certain simple forestry principles and keeping fire out of the woods. Just as I finished an old man got to his feet.

"'Folks,' he said, 'I been living here in these woods all my days and I can recollect when we had no fires. Our cattle

were fat then, and we drove them to Tampa to market. We drove so many that the grass was leanin' that way all the time. And we had money—somethin' we ain't got now and somethin' we ain't never goin' to have long as the woods is burned up.

"'Just last week some scamp put out fire on my place and burned my shed down. I tell you, folks, we ain't



Future Crusaders of the Piney Woods.

got a thing, none of us, and if we want our kids to save anything we got to stop this burnin'! And if I ever ketch anybody puttin' fire out on my place, I'll blow his head off.'

"At this point the old fellow was getting good and hot and his wife made him sit down. I thanked him, asked him to drop by after the show, and went back to the projector, feeling there was one farmer in Florida who would do much for the cause of forest-fire prevention."—W. L. MOORE, Lecturer and Motion Picture Operator, Florida.

"I was scheduling a show at a negro school near New Prospect, Mississippi. The principal, an old man, was skeptical.

"'Cap'n,' he said, 'yo' sho' they's no catch to this thing? Yo' ain't goin' to have somebody at the do' to take up collection, is yo'?'

"He was assured that there was no catch and that there was no admission, that all his people had to do would be to come in and sit down and look.

"'Well, boss,' he acknowledged, 'if this am a sho'-nuf free movin' picture sho', these niggers will be here.'

"After the program, I approached the principal. 'Well, professor,' I asked, 'did I tell you the right thing about this show?"

"'Yas, suh, Cap'n, yo' did, but the only trouble was yo' didn't make it near strong enough. I could've had mo' niggers than this if I'd knowed how good it was goin' to be. An' I'm goin' to make everybody 'round here live up to what that picture sho' told us. We is goin' to keep off fire from these pastures an' woods so my boys and girls can have some lumber an' wood to use when they grow up an' not have to go 200 miles to get it.'"—EARL T. TAYLOR, Unit Director, Mississippi.

## Dixie Crusaders Begin Work in South Carolina

Three Educational Units Speed Up Work Before Fall Fire Season

Three educational units of the Southern Forestry Educational Project of The American Forestry Association, which for the past two years has been conducted in Florida, Geor-

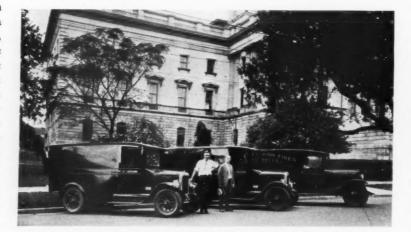
gia and Mississippi, went into action in South Carolina early in September, inaugurating the extension of the work into that State. At the same time it was announced that the headquarters of the Project had been moved from Thomasville, Georgia, to Lake City, Florida, to facilitate a new administrative plan during the third and final year of the Project.

The educational work in South Carolina was inaugurated in Kershaw County at the request of Lewis E. Staley, State Forester, who has been stimulating interest in this region in cooperating with the South Carolina Forest Service in forming forest protective organizations. From Kershaw County the three units will move to Aiken County, then to Berkeley and Charleston Counties that the effect of the educational work may be felt before the winter forest fire season. Following this the forty-seven counties in the State will be covered—county by county, school by school.

State Forester Staley has assigned district foresters to work with the units as much as possible. These men will prepare itineraries, make contacts and give every possible aid to the lecturers and motion picture operators in arranging for programs. J. M. Hopkins, Jr., assigned to one of the Florida units for the past year, will serve as unit director.

During the nine months of the school term, with each of the three units reaching at least three schools a day, it will be possible to give motion pictures and lectures in every school in

the eleven counties in which the State Forest Service has active protective organizations and in the counties in which protective organizations are being created. By July 1, 1931, it is planned to have reached every rural school and community in the State. Literature, pamphlets and bulletins, especially prepared for South Carolina. will be widely distributed.



The three forestry educational trucks lined up before the State Capital at Columbia, South Carolina.

There are nearly 20,000,000 acres of land in South Carolina, 8,000,000 of which are being farmed, according to State Forester Staley. The remaining 12,000,000 acres must grow trees. Of the area being farmed, more than 2,000,000 acres are farmed at a loss. This area, also, should be put to growing trees.

Conditions in the State are favorable for wood production, Mr. Staley says. Experiments have shown conclusively that more than two cords of wood an acre are being grown every year on well-stocked areas.

Public sentiment favors burning woods each year to kill boll weevil and snakes, and to "green up" the woods for pasture in the early spring. It is to change this attitude through education that The American Forestry Association and the South Carolina Commission of Forestry have raised a fund of \$16,500.

# The Chinese Elm at Home

By Alma Chesnut

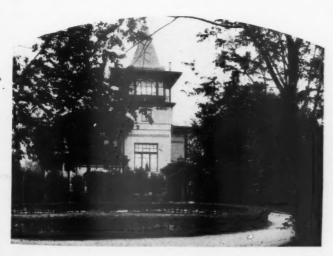
N the voluminous and mysterious archives of ancient China there was found recently a small slip of wood, about eight inches long and half an inch wide, on which twelve characters were inscribed in India ink, recording the planting many centuries ago of Chinese elms in Sinkiang.

Ten trees, the characters reveal, were planted at the place called Ch' in-su, a Chinese military post somewhere in the region of 93 10' and 94 30' East longitude and a little north of 40 North latitude. The record dates from the Han Dynasty, about the first century. It was brought from Central Asia by Sir Aurel Stein and translated by the French student of orientology, Edouard Chavannes.

Thus had the ancients set down, for future generations to see, what is probably the first account of the planting of Chinese elm trees for shade and beauty. But, as the years rolled by, the tree was propagated in increasing numbers by the people of Asia. Wealthy Chinese planted it in their gardens, adapting it to ingenious ornamental uses, and wild trees were cut for wood to make carts.

It found favor in the eyes of the gods because it made a good binder in the manufacture of incense, while the people found it suitable for many economic uses. The women of China made Pau Hoi from elm shavings to bandoline their hair. Food, too, was provided by the tree. The young, tender seeds were eaten fresh, boiled or fried; the bark of the young branches was dried, bruised and prepared as a gruel in times of famine.

Twenty centuries passed and, in 1908, a "plant hunter"



Residence and yard showing circular hedge of Chinese Elm.



A garden walk, arched with Chinese Elm.

from the other side of the world looked upon the elm tree and found it good. From Fengtai, near Peking, Chihli Province, he reported to his government as follows:

The Chinese elm, used all over northern China and Manchuria as an avenue, shade and timber tree, is resistant to drought, extremes of heat and cold, and stands neglect remarkably well. It will be a good shade tree for the semi-arid northern regions of the United States. Chinese carts are mainly constructed from the wood of this tree, which is called *Dja yu shu*, meaning "Family Elm Tree."

This plant hunter, the late Frank N. Meyer of the United States Department of Agriculture, brought with him to this country the following spring the first contingent of immigrants of this species from China. These were planted experimentally at first, but proved so adaptable to variations of climate and soil and so valuable for a variety of uses, that many additional trees have been planted, so that agriculturists now class the Chinese elm among the most important plant introductions that have been made.

China claimed the life of the plant hunter, as if in payment for the trees and shrubs and flowers he had collected to send out of the land. For more than nine years he had wandered on foot through the great Yellow Empire and during that time he had gathered more than 2,000 species and varieties of plants for trial in this country. He was on his way from Hankow to Shanghai when he was drowned in the muddy waters of the Yangtze River, June 1, 1918, and laid to rest in the Bubbling Well Cemetery at Shanghai. The Chinese elm—Ulmus pumila, or dwarf elm—

has proved suitable for shade and ornamental planting over a wide area of its adopted country, but its outstanding use has been for shade and shelterbelt planting in the Great Plains area and in the semi-arid regions of the Southwest, where it is without a rival among either native or introduced species. As an ornamental tree-one of its chief characteristics is that it puts out its delicate foliage early in the spring and is one of the last trees to shed its leaves in the autumn. It lends a pleasing oriental air to a garden; even the fruit, thickly clustered along the branches, is flower-like and beautiful.

Excellent results have been obtained in propagating the tree by means of piece-root cuttings an inch or two in length, and seeds for planting are now being produced abundantly by American-grown trees.

But in spite of all the enthusiasm evinced for this elm in the United States, it has not been exploited for ornamental planting, as it deserves to be, says P. H. Dorsett, agricultural explorer for the Bureau of Plant Industry. Mr. Dorsett has traveled extensively in the Orient and, during a recent trip, especially studied decorative uses of the dwarf elm. The photographs accompanying this article were taken by him in China. They tell the story better than words.

"The Chinese elm at home," says Mr. Dorsett, "is used more for ornamental planting, hedges, borders, pyramidal and globular-headed effects for formal uses, than any other tree. At Harbin, Manchuria, it is lavishly used for park and ornamental planting and lends itself admirably to the gardener's handicraft of heading in and pruning to various desired forms, particularly for large and small hedges.

"As an avenue and shade tree it is found in abundance in and near Peking. In this connection it is interesting to note that the individual trees, left unpruned, do not have the symmetry and beauty of those that have been grown in the United States but present a ragged, uneven appearance."

In its Old World habitat, the Chinese elm presents a variety of forms. When left to grow untended it branches freely along the stem and develops into a low, bushy tree. Some specimens, however, grow upright with stiff branches. Others droop gracefully like a weeping willow. When Mr. Meyer found a "weeping elm" near a grave at Fengtai, he jotted down in his note-book, "Well fitted as a cemetery tree for the semi-arid regions of the United States." But, as far as is known, nurserymen have not yet promoted its use in such a fashion, though difficulty must be experienced in finding suitable plants for these cemeteries.

## From a Forest Ranger to His Dad

(Continued from page 631)

poor animal could hardly stand up. When it came Chet's turn to pack, he felt sorry for the animal and did not pull the lash rope tight. They flunked him for that, but I'll bet he has found an eternal friend in that horse.

Saturday we went out and made a line around an imaginary fire. Howard explained the different methods of fighting fire in its different stages. The most unique method concerned crown fires, those roaring infernos that race across the mountain, eating clean as they go.

"When you see one like that coming toward you," Howard said, "there's only one thing to do. Pull off your coat, pray for rain and run like hell."

They examined the calks in our boots, our pocket knives, our watches and in fact, almost everything a woodsman is supposed to have, and if we didn't have it, they counted points off from our general score. We were quizzed on little common tricks known to woodsmen and foresters and sometimes asked foolish questions, as: "What would you do if you were on your way to a fire and a bear were to chase you up a tree. It's against the game law to kill the bear and yet the fire is burning larger every minute. You have your orders to respect the game law and yet get to the fire as quickly as possible?" Such answers were received as: "If its a she bear, vamp her," and "Let nature takes its course." All this, of course, was in fun, but it served to break the

monotony of the harder work and more serious quizzing.

The nights were the most glorious of all. We sat around the stove in the ranger station and swapped yarns. And some of those tales were lordly. For my benefit, I think, Bob told about seeing a bear track near the top of Thompson Peak that measured eighteen inches. Charlie had to bring in the story of a big cougar that hung around Thompson, and then someone had to tell how cold it was up there, even in summer. Shorty kept talking about the "weather side of Thompson Peak" until I finally asked him which side was the weather side. He said, "The outside, Georgia," and the way he drawled it made me blush.

Howard told me before I left Plains that he was going to send Paul, the assistant ranger, up here, to go to Thompson with me. Then I am going down and help throw a telephone line to the top of Penrose Peak. Penrose will be Charlie's lookout for the summer. They say that the country around there is almost as wild as that near Thompson, and Howard said that he would probably be in there a week, stringing wire to the top.

This should be interesting, Dad, and I'll write you all about it if I ever come out alive.

Your son,

CHARLIE.

(To be continued in the November issue)

# The Human Fly

By JAMES B. BEALS

Illustrated by Alfred G. Clayton

NE warm sunny morning in June, 1927, the "Creator," as he so stoutly professed to be, returned to earth for the purpose, as he also confided, of polishing up his first rather rough attempt at beautifying southern Colorado.

His coming was prosaic, to say the least, but strictly in keeping with twentieth-century methods of rubbershod ambulation, for he reached his improvement project by way of a precarious seat on the rear of a large gasoline truck. The gasoline was bound for the Rainbow Trout Lodge, a resort in the heart of Conejos Canyon, and it was at this point

that our deity in disguise started up the road afoot past the Horton Ranch. Mrs. Horton, who has never knowingly let a hungry human, horse, or dog pass her gate without providing repast, shouted from her cabin porch to the bewhiskered plodder to ask if he had yet breakfasted. The figure turned in the gate and approached the cabin. "Madam," he said,

"I am Jesus Christ, returned to earth to complete its construction. What need have I for food? I see my path shining straight ahead, and I must proceed to my duty." An attempt was made to dissuade the

man, to keep him in conversation until authorities could arrive. His calling proved too strong, however, and short of violence, which was not resorted to, there was

no detaining him. In order to keep track of the unfortunate fellow, Layton, Mrs. Horton's foreman, picked up a rope and accompanied him up the narrow, trail-like road, explaining that he wished to catch a horse at the upper ranch. After a short distance, the master landscape architect suddenly halted and pointed toward the eastern canyon wall. "My work starts here," he said bluntly. "Good day to you." Layton expostulated with him, explaining that an ambidextrous mountain goat could not get over that rim, but all to no avail.

So, after abandoning his serious intention of forcibly tying the man up

then and there, Layton allowed him to go his way, and returned to the ranch. He reasoned it would be a simple matter of finding the man later on, wandering along the base of the thousand-foot wall. He immediately communicated with the county sheriff, thirty-five miles away.

About mid-afternoon I dropped by the Horton Ranch to mark a set of house-log trees. Hardly had I time to dismount and unsheathe my marking hatchet when Mrs. Horton called from the porch to ask where my deputies were. Never having had the need for deputies to assist in the marking of timber, I was at a loss for a suitable reply. Mrs.

Horton, however, realizing that I was in complete ignorance of the drastic changes contemplated in the topography of my canyon-marred district, made the situation clear in a few sentences. And, since the sheriff and his men were on their way to the ranch, we decided to await their arrival before starting the search.

Shortly thereafter the sheriff and four deputies arrived, all armed to the teeth. Agreeing on a plan of action, we spread out to find and retrieve some asylum's missing inmate. Layton and I took up his tracks where he had left the road and headed for the rim rock, while the others spread out along the base of the rim. The southwestern slope of the canyon was dry as pitch kindling and tracking was slow and tedious. We followed the sign, however, in an almost direct line from the road to the edge of the timber at the base of the cliffs.

Here we called our men together and, spreading out over a front of about one hundred yards, we literally combed through the immense boulders that had in ages past been dislodged from the face of the cliff. We expected to find our man asleep in the shade of one of these rocks, but during the course of this hunt Layton and I again found his tracks and decided to stay with them rather than search promiscuously.

Our decision finally brought us slam bang up against the rock wall with a narrow, insecure shelf occasionally breaking its vertical outline.



After an hour of hard climbing up the nearly vertical face of the wall we finally reached the rim.

Not dreaming of the possibility of any man being able to scale that cliff, we split, Layton going one way along the base of the wall, and I the other. Neither of us, however, found so much as a disturbed pine needle. We returned.

Doing the usual thing when puzzled, we both dragged out our tobacco and rolled one. For a while we cogitated, even to considering the possibility that our quarry had waved his wand and disappeared. Finally our eyes made us believers, and shedding our riding boots, we started with some trepidation up the face of that wall. Sure enough, fresh scratches on the rock showed us where our bird had flown. Neither of us being gifted with qualities of a steeplejack or a mountain goat, we crawled back and again called our gang together for a conference.

By this time it was almost sundown, and if we were to find our man that day it would be necessary to resort to short cuts. The nearest horse trail—the old Ute Indian Trail—was three miles below us, but to return to our horses and then up that long, hard climb out of the canyon and back along the top of the rim to a point directly above us before dark, was out of the question. On the other hand, about three-eighths of a mile above us was a narrow fissure in the face of the wall through which Layton believed we could scramble to the top.

We decided to try this route, and after an hour of hard climbing, during which a hurtling rock dislodged above caught me on the taut muscles of my thigh causing considerable pain and annoyance, we reached the top of the rim. Keeping along the dizzy edge of the cliff, we quickly walked back to a point directly above where we had abandoned the tracks.

And there in the wind-torn soil of the cliff's edge were the tracks of the world's best mountaineer. We could hardly believe our eyes; and to look over that cliff and down its face—well, once was enough for me. I know enough about climbing to know that the wall in that place presents a problem worthy of any professional's efforts. The utter lack of fear which this poor fellow's distorted brain made possible was no doubt his only safeguard, and I shudder to think what would have happened had he suddenly been snapped back to normal midway up the face of that sheer wall. The amazing detail of his climb, to me at least, which turned up when he was finally captured, was the fact that he toted his little "hot-roll" of belongings with him.

After spending a few moments marveling at the fellow's daring, we again took up his tracks. Their direct line and methodical spacing told a plain story of a deliberate, single-purpose mind, for they headed straight down the gentle slope of the mesa into the Engelmann spruce timber. Here on

the northeastern slope the snow still lay in great drifts in the timber, although the warmth of the day had made it too soft to hold a man's weight. The tracks deviated from the original course not a whit; in fact, the man waded through wet snow hip deep in several places where a short detour would have taken him around the drifts.

We followed the tracks through the neck of timber and into the head of Vega Redonda, a long open draw that leads down into the Valle La Jara cow country. Here we abandoned the search because of darkness, and returned by the way of the Ute Trail to the canyon. We were a mighty tired and footsore bunch of riding men that night.

Because of prearranged engagements with sheepmen the next day, I was forced to drop out of the party. Anyway, we were certain that our quarry had crossed the National Forest boundary and was somewhere in the midst of the large fenced cattle pastures of the Valle La Jara. The sheriff decided to return to the valley and organize a searching party from the east the following morning.

Upon returning to the ranger station a few days later, I learned that the sheriff's search of the next morning had proved fruitless save for information given by two cowboys to the effect that the hunted man had stopped at their camp about noon and was asked to eat dinner. He disappeared during the preparation of the meal.

The third day, however, he was apprehended at the station of a reservoir attendant on the Alamosa River, twenty miles in an airline from where he had quit the gasoline truck. And such miles! I wouldn't travel them afoot for anything less than supervisor's orders. He offered no resistance when taken, but kept crying for food. It was then learned that he had eaten nothing since the morning he had boarded the gasoline truck in Antonito, almost three days before.

From the poor fellow's ravings it was learned that he had been in Delta, Colorado. Communicating with Delta, the sheriff learned that our man had been sent from there to the State Asylum, in Pueblo, some months before, but had been missing from the latter place several weeks. The sheriff was also warned to take no chances with his captive, as he had in a moment of madness cleaned up two deputies and the city marshal at Delta.

Upon pointing out to those interested in the story of the crazy man's climb the place where he scaled the canyon wall, I have several times been accused of prevaricating for the sake of lending romance to local features. As a result, Layton and I have reached the point where we try to change the subject when the incident is mentioned. Were it not for the fact that there were seven of us to check each other in our stories, this story would never have been told.



# Smokers' Fires Increase

1929 Compilation Shows Annual Forest Fire Loss Exceeding \$100,000,000.

ORE than 46,000,000 acres were burned over by forest fires in the United States, exclusive of Alaska, in 1929, causing a damage of \$102,000,000, according to the United States Forest Service. This is an increase of nearly 2,000,000 acres over the area burned in 1928, and an increase in damage of \$19,000,000.

All of the increase of area burned over was on unprotected lands. The area burned over on protected lands—National Forests, State Forests and forest lands protected by private agencies and individuals—showed a slight decrease. Of the increase in forest fire damage, \$14,000,000 was on unprotected lands. The loss on protected areas increased \$5,000,000.

Smokers were responsible for twenty-two per cent of all fires on protected areas. There is no record of the causes of fires on unprotected areas. This represents an increase of two per cent in smokers' fires over 1928, three per cent over 1927, and five per cent over 1926. Seventeen per cent of the fires

were attributed to incendiarism, twelve per cent to brush and débris burning, ten per cent to lightning, nine per cent to campers, eight per cent to railroads, and the remainder to miscellaneous and unknown causes.

Smokers were responsible for the greatest number of fires in every section of the country with the exception of the Gulf States, where incendiarism predominated, and the Central States, where more than one-third of the fires were caused by brush burning. In 1928 smokers were responsible for the greatest number of fires in only the Lake States, Northeastern States and the Pacific Coast States.

Eighty-eight per cent of the total damage occurred in the Southeastern and Gulf States, while six per cent occurred in the Pacific Coast States. The Rocky Mountain States were responsible for three per cent. In 1928 ninety-one per cent of the forest-fire damage of the country occurred in the Southeastern and Gulf States.

## SUMMARY OF FOREST-FIRE STATISTICS, BY GROUPS OF STATES, FOR THE UNITED STATES, EXCLUSIVE OF ALASKA, CALENDAR YEAR 1929

Data for fires on unprotected areas are based upon partial information only, from incomplete reports

		Number of	fires		Damage					
Group of states	On protected area	On un- protected area	Total	Per cent	On protected area	On un- protected area	Total	Per		
United States (Continental exclusive of Alaska)	44,076 3,952 4,357 3,863 12,766 1,466 5,862 4,545 7,265	90,819 38,404 50,828 1,403 164 20	134,895 3,952 4,357 42,267 63,594 2,869 5,862 4,709 7,285	100. 2.9 3.2 31.3 47.2 2.1 4.4 3.5 5.4	\$14,138,550 228,100 587,250 452,360 2,341,540 161,650 928,780 2,836,620 6,602,250	\$87,916,850 46,289,260 41,081,190 521,150 15,010 10,240	\$102,055,400 228,100 587,250 46,741,620 43,422,730 682,800 928,780 2,851,630 6,612,490	100. .2 .6 45.8 42.5 .7 .9 2.8 6.5		

#### Area, in Acres, Burned

		-											
Group of states		1	Forest lan	d		No	n-forest l	and	Total pro- tected area burned	Per cent	On un- protected area	Grand total	Per
	Mature	Pro- tection forest	Young	growth	Total	Pro- tection brush and grass	No pro- tection or forest value	Total					
	mer- chant- able		Will restock	Will not restock									
United States (Conti- nental exclusive of Alaska)	953,720	340,750	1,891,960	445,620	3,632,050	855,470	388,800	1,244,270	4,876,320	100.	41,353,800	46,230,120	100.
ortheastern Middle Atlantic Joutheastern Gulf	10,200 33,150 73,480 276,380	3,000 1,740		1,020 1,310	33,440 71,320 237,000 1,373,820	21,980 14,230 17,460 53,040	9,010 12,980 1,570 12,020	30,990 27,210 19,030 65,060	64,430 98,530 256,030 1,438,880	1.3 2.0 5.3 29.5	25,284,530 15,890,460	64,430 98,530 25,540,560 17,329,340	55.3 37.5
Zentral ake Rocky Mountain Pacific	43,650 19,210 165,930 331,720	103,270 232,740	46,090 118,100 134,690 370,830		89,740 166,240 454,410 1,206,080	73,260 48,680 626,770	2,570 324,760 14,600 11,290	2,620 398,020 63,280 638,060	92,360 564,260 517,690 1,844,140	1.9 11.6 10.6 37.8	9,020 1,250	260,900 564,260 526,710 1,845,390	1.3

# Hyde Urges Organized Forestry for Arkansas

## Secretary Promises Aid of Federal Government in Establishment of State Forest Service

AD Arkansas been prepared to carry out an acceptable plan for protecting her timberlands from fire during 1929, the federal government would

have shared the cost upon a dollar-for-dollar basis up to a maximum allotment of \$43,560. As it was, federal cooperation was limited to the employment of an extension forester by the College of Agriculture at Fayetteville."

This statement was included in a letter, dated August 9, 1930, received by Governor Harvey Parnell of Arkansas, from Secretary Hyde of the United States Department of Agriculture. The Secretary's letter was in response to a request from the Governor that the United States Forest Service study the forest situation in Arkansas.

After reviewing the remarkable forest history of Arkansas, and the extent to which the prosperity of the State depends upon its forests, the Secretary earnestly recommended the establishment of a State Forest Service under trained and experienced leadership, together with an appropriation of adequate funds for carrying out its responsibilities. Such an accomplishment would permit the United States Department of Agriculture to cooperate with the State in the development of a forestry program.

Pointing out that fifteen southern states now have forestry departments engaged in the protection of their forests from fire, the Secretary showed that Arkansas alone fails to take advantage of federal cooperation, under authority granted by the Clarke-McNary law. Alabama, with a fairly

comparable area of forest land, received a federal allotment of \$41,097 during 1929 to help make a budget for the protection of her forest lands totaling \$82,852. The largest budget for forest protection of any southern state was in Louisiana, where the federal appropriation of \$47,335 was a considerable proportion of expenditures, totaling \$133,328, while Florida's total of \$109,852 included \$53,736 of Clarke-McNary funds.

With the experiences of thirty-eight other states as a guide, Arkansas has a splendid opportunity to maintain and develop her forest resources through the organized effort of all available agencies—private, State, and Federal—in the prevention and control of forest fires.

The national character of the forestry problem, according to the Secretary, warrants the federal government in assuming a definite share of the responsibility for keeping productive the timberland of the entire country. Many benefits resulting from protection of the forests come to the general public and not to the owner. Furthermore, many fires are caused by agencies over which the individual has no control. For these reasons the necessity



The farmers of Arkansas own more than five million acres of woodland, the protection and development of which will enhance farm income and value.

for public leadership is clear. Significant among the data submitted by the Secretary to Governor Parnell is the fact that the farmers of Arkansas own 5,300,000 acres of woodland, which can produce valuable crops of wood. This condition is widespread, for forest land in every country comprises at least thirty-five per cent of the total land area. Only about 9,000,000 acres out of a total forest area of 22,000,000 acres are held in large tracts.

"The original forests of Arkansas," continued the Secretary, "covered approximately 32,000,000 acres and contained between two hundred and three hundred billion feet, board measure, of timber. Probably no other state in the South, except Georgia, had such extensive and valuable forest resources. Today there remain approximately 2,000,000 acres of old-growth timber and 20,000,000 acres of cut-over land which is under some form of forest growth and which is essentially suited to permanent forest production. Upon the present forest area there is estimated to be about forty billion feet, board measure."

Nor is Arkansas without the means to utilize the products from her forests, for thirty-five per cent of all manufacturing establishments reported in the State during 1927 were lumber and wood producing plants. The extent to which Arkansas' prosperity depends upon the forest is shown by the fact that sixty-three per cent of all the wage earners are employed in sawmills and woodworking establishments.

In spite of this situation, the Secretary states, forest fires continue to convert productive forests into idle lands. Each year from 5,000 to 10,000 woods fires burn over nearly 3,000,000 acres in Arkansas. More than half of the cut-over lands in the State have been burned over within recent



From five thousand to ten thousand fires occur annually in the woods of Arkansas, burning over two to three million acres. Fully ninety-eight per cent of these fires are man-caused, and therefore preventable.



The productive capacity of fifty per cent of the cutover forest land of Arkansas has been reduced to less than one-half, much of it to less than one-fourth of what it formerly was by overcutting and by forest fires.

years so as to reduce their productive capacities to a fraction of what it was formerly. Yet ninety-eight out of every one hundred woods fires in Arkansas are mancaused and could be prevented. Until this destruction by forest fires is overcome, no adequate returns can be secured from the forest lands of Arkansas.

If fires are kept out of the woods, the rapid growth of highly valuable species will make the growing of timber as a crop a promising undertaking. The Secretary's letter is saved from being merely an exposition of uncomfortable facts by his offer of federal cooperation in the establishment and maintenance of a State Forest Service. The opportunity is one which Arkansas can no longer afford to ignore.



#### A Houdini, Perhaps

A hunter was showing off his collection of trophies to a group of visitors. He was rapturously explaining how he acquired the various exhibits.



"See that elephant," he said, "I shot it in my pajamas."

"My Gawd," murmured the flapper, "how did it get there?"-Lumber Cooperator.

#### The Woods Quartet

New Jersey officers captured a large still operating in a swamp. It is rumored that nearby residents became suspicious when mosquitoes kept them awake nights humming "Sweet Adeline."—Life.

## Woodman! Woodman!

Woodman, spare that tree— Touch not a single bough! It sheltered me when I was young— And it's full of sitters now!—New York Sun.

#### And We've Got a Byrd-

Sambo: "I'se got two new cats."

Hambo: "Dat so? What you call 'em?"

Sambo: "Cook and Perry."

Hambo: "Why you call 'em Cook and Perry?"

Sambo: "'Cause dey is pole cats."-Texas Longhorn.

#### Famous Last Words

His hunting companion had mistaken him for a deer, and shot him. "Tell them I died game," he gasped.—Naval Stores Review.

#### Page S. S. Van Dine

Mother: "Willie, the canary has gone!"

Willie: "But mummy, it was there just now when I was trying to clean its cage with the vacuum cleaner."—Dublin Opinion.

### And a Mouthful of Teeth, Old Gold-

Teacher: "If a number of cattle is called a herd, and a number of sheep is called a flock, what would a number of camels be called?"

Little Johnny: "A carton."-The Disston Crucible.

## Seeing America's Advertisements First

If all the billboards in the United States were placed end to end they would reach just as far as they do now.—Louisville Times.

#### Parked

"Anyway, mother knows where to find her tree-sitting boy or girl," says the *Toledo Blade*, which adds that, while preparing for future generations, we must not forget to plant more trees for posterity to sit in.

#### But It's a Clinging Vine

Scientists say plants make love like human beings, but somehow we can't imagine the poison ivy talking baby talk.—Macon Telegraph.

## The Difference

Family trees aren't like others. In others appearance of the sap is an indication of continued vigor.—Montreal Daily Star.

## More About Paul Bunyan

In the spring previous to the blue snow an employment agency sent to Paul Bunyan's camp a big immigrant who became known as Awkward August. The first day out he got a peavy caught on his own leg and before he found out his mistake, he jerked his foot around, kicking Babe, the blue ox, in the ribs. Babe ran away and it took Paul four days to gentle Babe again so he'd go back to work.



So August was put to gardening with instructions to raise a mess of spinach that had some iron in it. Determined to make good, August broke up a lot of old logging chains, scattered them around the garden and sowed the seed. In about two weeks he called the cook, Sourdough Sam, out to test the crop, which he did with a big magnet he kept for the purpose. Sure enough, the spinach flew out of the ground and hung to the magnet until they had to get four ox teams to drag it into the cookhouse. Paul fed his men on spinach for three weeks, but Sam had to throw out a lot of it in the garbage pit where it lay forgotten for many years. Lately the pit has been discovered near Ishpeming, Michigan, and large quantities of rich iron ore are being removed daily.

# IDENTIFIED\* CUT-TO-SIZE CRATES

## FOR STANDARDIZED PRODUCTS

Weyerhaeuser Cut-to-Size Crates, designed specifically for your standardized products, make possible substantial reductions in your shipping costs.

Because they are scientifically designed and Laboratory-tested, Weyerhaeuser Crates exactly meet the shipping requirements of the individual product. There is no haphazard assembly, no variance in kinds, sizes and weights of lumber. In hundreds of instances the Laboratory method of analysis and design as developed by Weyerhaeuser has revealed wastes in labor and materials and eliminated them by the use of proper woods, correct design and orderly assembly.

The Weyerhaeuser Method shows you the minimum amount of lumber required — the right kind, the exact size, the correct weight, and the specific number of pieces. This frequently means lower lumber and freight costs.

The Weyerhaeuser Method creates orderly arrangement and specific method of packing, resulting in speedy assembly and minimum labor cost.

The completed crate is strong, rigid and safe—assuring a minimum of troublesome and costly damage claims. And because it is right, it is stamped with the approval of our crating engineers — The Weyerhaeuser Seal!

Even though the design of your present crate may be perfectly satisfactory, we frequently can show you savings through the use of proper woods and because of our specialized manufactur-

> ing facilities and our long experience in solving industrial problems of this nature.

An estimate on your present requirements for cut-to-size crates, or a cost-saving Laboratory Analysis of your shipping methods can readily be arranged through our nearest district representative.

For the manufacturer who is unable to take advantage of the economies of cut-to-size crates, Weyerhaeuser offers a variety of ideal Light Weight Crating Woods in standard grades and sizes. These woods are light weight, nonsplitting and of ample strength to assure adequate protection, making possible unusual savings in both labor and freight costs.



Crate History No. 232

The crate in which this machine was originally shipped to our Laboratory at Cloquet was heavy, complicated to build and contained too much lumber for the amount of protection given the machine. It lacked rigidity. The top and bottom were made in sections, while the sides and ends were nailed in place during the crating operation.



The Weyerhaeuser Laboratory Designed Cut-to-Size Crate was made of lighter weight woods and consisted of top and bottom sections and two identical side and two identical end sections. Two uprights in the bottom section formed the mounting for the machine, properly distributing the weight and eliminating the bracing and blocking used in the old crate. Savings effected were 23% in lumber, 28% in weight and reduced labor because of easier assembly! And obviously a neater crate!

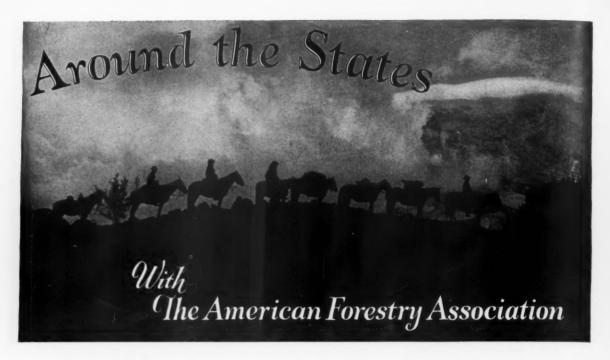
It usentifies only the craic that indergone scientific study and Laboratory analysis . . . the craic that has been proven to be soundly designed and properly assembled. It is the mark of approval of the Weyerhaeuser Crating Engineer.

The Weyerhaeuser Seal is a symbol of demonstrated worth. It identifies only the crate that

Crating Sales Division

WEYERHAEUSER SALES
307 NORTH MICHIGAN AVENUE

SALES COMPANY CHICAGO, ILLINOIS



## George S. Long Dies

George S. Long, Vice President and General Manager of the Weyerhaeuser Timber Company, and a member of the Board of Directors of The American Forestry Association from 1922 to 1927, died at Klamath Falls, Oregon, on August 2, at the age of 77 years. During his entire life Mr. Long was associated with lumbering, and until his retirement last summer was chairman of the forestry committee of the National Lumber Manufacturers Association. He was

also vice president of the Western Forestry and Conservation Association, as well as vice president and trustee of the West Coast Lumbermen's Association, and chairman of its forestry committee.

### Senator Hawes to Head New Wild Life Organization

According to an Associated Press dispatch of September 5, an organization to conserve American wild life and game, to be endowed with \$10,000,000, and headed by Senator Harry B. Hawes, of Missouri, is being formed by Joseph P. Knapp, chairman of the Executive Committee of the Crowell Publishing Company, and chairman of the Board of P. F. Collier and Sons.

According to the dispatch, Senator Hawes plans to announce his with-drawal from politics at the end of his senatorial term to devote his time to the conservation project. The dispatch further stated that he would

take over the work at once and serve without pay until the expiration of his senatorial term, in 1933, when he will receive a salary of \$50,000 a year.

The program of the organization, the Associated Press says, embraces the establishment of bird and game refuges throughout the United States and cooperation with the government and the states in the enactment of legislation and regulations for the conservation of wild life of the nation.



Senator Harry B. Hawes

## California Blames Unemployed for Forest Fires

Incendiary origin is ascribed by the State Forester, M. B. Pratt, to twelve per cent of the 900 forest, brush and grass fires that have occurred in California this year.

The principal cause of these incendiary fires has been to burn off brush to improve grazing and to get work fighting the fires, according to Mr. Pratt, who said there have been only two or three instances of malicious

> incendiarism. Investigators are now working on these cases, but Mr. Pratt said it was almost impossible to get evidence on which convictions could be obtained.

> In some instances, Mr. Pratt said, men employed to fight fires have been known to have set other blazes so that they would have jobs for a longer period.

"We have quit employing floaters for fighting fires except in emergencies," the forester said; "we hire local men almost entirely. It is better to have ten men whom we know are all right than to have fifty, two or three of whom may be setting more fires and undoing what has been done. Floaters on fire-fighting crews last year set fires in Butte County. Floaters have a tendency to concentrate in towns that have labor agencies and wait for jobs fighting fires. If the fire calls don't come they go out and see that they do come.

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"If it were not for the incendiary fires our problem, as far as the State Forest Service is concerned, would be comparatively simple."

#### Trout Swims Lake Michigan in Seven Days

Within seven days a fourteen-inch rainbow trout was caught twice, once at Port Washington, Wisconsin, and the second time near Grand Haven, Michigan. If the fish traveled a straight course across Lake Michigan, he would have gone eighty-seven miles during the week, or an average of twelve miles a day. If he chose to follow the shore line around the southern end of the lake, he would have gone a minimum of 200 miles, or 37 miles a day.

The trout was tagged at Port Washington July 14th, and was caught in a net five miles north of Grand Haven Harbor July 21.

### New Forester for Tennessee

James O. Hazard, for several years assistant state forester of Virginia, has been named state forester of Tennessee, to succeed R. S. Maddox, who has headed the Tennessee department for sixteen years. Mr. Maddox becomes assistant state forester of Virginia. The new Tennessee forester is a graduate of the Vale Forest School.

## Wild Life Facing Extermination Unless Winter Fed

Drought, overgrazing, forest, grass and brush fires together have created an alarming condition for wild life to face this winter, says the American Game Protective Association. Starvation and exposure threaten their extinction in many localities.

Sportsmen's organizations, state game conservation departments, farmers, the aeronautical committee of the American Legion, and other Legionnaires, together with Boy Scouts are already arranging to help meet the enormous demand for winter feeding for game animals as well as song and insectivious birds.

Overgrazing, which has caused many cattle to be removed from starvation areas says the Association, has not only exhausted the food supply for many species of game, but has wiped out the cover as well. Birds and animals need cover in which to hide from their natural enemies and for shelter from the weather.

#### New Hampshire Forestry Conference

Featuring rural betterment through the practice of forestry and adequate forest taxation, the New Hampshire annual forestry conference was held at North Woodstock early in September. The organizations sponsoring the conference were the New Hampshire Forestry Commission, Hampshire Federation of Women's Clubs, Appalachian Mountain Club, Society for the Protection of New Hampshire Forests, and the New Hampshire Farm Bureau.

WHEN YOU GET A SHOT YOU GET A DUCK with SUPER-X



## For Duck Shooting Thrills Take Along Super-X

There's more real sport in pulling down a "high one" than there is in many shots at the average ranges.

When you go out for ducks, use the famous long-range Super-X shotgun shell. It is just as effective on the high-flying ducks as it is on those that come in close.

Clean kills at remarkable distances are possible with Super-X because the pellets in the shot charge travel toward the bird at practically the same speed, in a compact mass, instead of stringing out. That's the exclusive Short Shot String feature of the Super-X load. Try Super-X. You will never be satisfied with any other shell for duck or goose shooting. For quail, rabbits and other upland game, shoot Western Field shells or the Western Xpert shell-a hard-hitting, top-quality load at a popular price.



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Chinese Elm

# Here Are Hurry-Trees

Occasions arise which call for the fastest growth possible—a quick screen to shut out an unsightly view, something to hold a steep bank from washing out, a thousand circumstances arise every season. There are a few trees whose rate of growth is so phenomenal as to pass all other varieties—3 to 5 feet a year are quite possible. No actual figures are given for the Chinese Elm, since this growth depends on circumstances. It is, however, among the fastest of the desirable species.

## Chinese Elm (Ulmus Pumila)

A new variety introduced by Dr. Wilson of the Arnold Arboretum. It has been proved hardy from Texas to Cape Cod. It can be shipped with dry roots. It thrives in dry locations. It must not be planted, however, in wet heavy land, if quick growth is desired.

	4										(10)	(100)		
5	to	6	feet.									\$11.00	\$100.00	
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#### Director of Budget Bureau Confers on Forestry

Insofar as money is available, increased appropriations may be expected for forest protection, for forest development, including research and planting, and last of all for forest acquisition. This is the substance of an oral statement by Colonel J. C. Roop, Director of the Bureau of the Budget, made on September 12, 1930, following a hearing which he gave to John F. Preston, of the Hammermill Paper Company, Erie, Pennsylvania, Franklin W. Reed, of the National Lumber Manufacturers Association, of Washington, D. C., and G. H. Collingwood, of the American Forestry Association.

Colonel Roop emphasized the fact that he is favorable to the appropriation of sums adequate for the protection of forest lands now owned by the Federal Government, and for cooperation with the States under the Clarke-McNary law. Insofar as funds are available he would use them for planting idle land on national forests, and for research, but under present financial conditions he does not favor increased appropriations for the purchase of more forest land by the government.

According to the Director the Government faces a fiscal year of great financial stringency and efforts will be made to avoid recommending additional appropriations for next year's budget.

#### Hawaii Planting American Trees

A recent report by C. S. Judd, Territorial Forester of Hawaii, shows that white ash (Fraxinus americana) and American redwood (Sequoia sempervirens) are being planted to a considerable extent on the islands of Hawaii. Other American trees include black locust, elm and cypress.

### Decrease in Hunting Licenses

More than 6,425,000 hunting licenses for taking wild game were issued to sportsmen throughout the United States, including Alaska, in the season 1928-29. The revenue to the States amounted to more than \$9,390,-000. This sum includes receipts from combined hunting and fishing licenses but not from licenses issued for fishing only. Detailed figures for the season, compiled by the United States Biological Survey show a slight decrease in the number of licenses issued and a small increase in the money receipts as compared with the preceding three years. In the 1925-26 season, 5,332,375 hunters paid for their licenses a total of \$7,-130,102, while in the 1926-27 season 5,989,795 hunting licenses were issued, bringing a revenue of \$8,187,223 to the States. In 1927-28 6,462,555 licenses were issued, and the fees paid were \$9,338,173.

New York State, with 677,137 licenses and \$703,047 in money returns, heads the list.

### Government Accepts Great Smokies as National Park

Titles to the land which will constitute the nucleus of the Great Smoky Mountains National Park has been passed upon formally by the Attorney General, William D. Mitchell, and the land has been accepted by the government, according to the National Park Service.

National preservation of at least a portion of the most magnificent mountain scenery in the eastern section of the United States has thus been assured. The area embraced covers 158,876.50 acres. These lands will form a nucleus for a great park with a minimum area of 427,000 acres. The park may be extended to include over 700,000 acres under the act of Congress authorizing its establishment. Funds to acquire the minimum acreage are available to the states of North Carolina and Tennessee.

Already plans have been made for transferring from the western parks several men thoroughly trained in National Park work and policies, to undertake the protection and administration of the area now in the possession of the United States. This means primarily guarding the forests against fire and the plants, animals, and natural formations against damage or destruction. Later, when the entire minimum area of 427,000 acres has been offered to the United States and accepted by the Secretary of the Interior, it will receive full park status.

In addition to the Great Smoky Mountains National Park, two other large National Park projects have been authorized by Congress in the East, namely, the Shenandoah National Park in Virginia, and the Mammoth Cave National Park project in Kentucky. Large funds for the acquisition of these areas are in the hands of the separate state agencies, and considered sufficient to acquire the land necessary for these parks.

Definite approval of the proposed Tropic Everglades National Park project in Florida also has been given by the Interior Department, after an examination by its park experts established the fact that it measured up to the high National Park standards.

### Madsen With Park Service

David H. Madsen, superintendent of the Bear River Migratory B'rd Refuge near Salt Lake City, Utah, has been appointed land purchaser in the National Park Service.

Mr. Madsen and his titular chief, Frank Solinsky, will classify, appraise and try to obtain options on private land holdings within the boundaries of the National Parks.

Congress has authorized a fund of \$3,000,000, part of which has been appropriated, for purchase of privately owned land in the parks, but there is a stipulation that the money can be used for this purpose only when matched dollar for dollar by contributions from private interests. A number of holdings have been acquired in this manner, the most notable of which is a stand of white and yellow pine in Yosemite National Park.

## Pennsylvania Extends State Forests

Extension of the state forests of Pennsylvania on a greater scale than hitherto undertaken has been revealed by Secretary Charles E. Dorworth of the Department of Forests and Waters.

Referring to the enlargement of the state forests made possible by the \$500,000 land purchase appropriation of 1927 and the \$1,-000,000 appropriation of 1929, Secretary Dorworth reported that 422,866 acres of new lands were acquired or under contract for purchase. Funds still available will make possible the additional purchase of from 25,000 to 50,000 acres. By the close of the present administration the state will own upwards of 1,550,000 acres. The area of the state forests was 1,131,051 acres on January

Under the half million dollar biennial appropriation for 1927-1929, 153,906 acres of state forest land were acquired in twenty different counties at a cost of \$431,469.63, or an average of \$2.80 an acre. Under the \$1,000,000 appropriation which became available on June 1, 1929, 268,960 acres have already been purchased or contracted for. Total obligations toward actual cost of the land under this appropriation now amount to \$772,917.65, or an average cost of only \$2.88 an acre. Expenditures for state forest acquisition are limited by law to not more than \$10 an acre. The lands being secured under this \$1,000,000 appropriation are located in twenty-two counties.

#### Reserve Land Near Death Valley

An area of the Public Domain adjacent to Death Valley, in California, has been reserved from entry temporarily, pending consideration of the advisability of turning it into a National Monument, according to the Department of the Interior.

This area is located within, or contains strategic points of unusual interest adjacent to the famous Valley, and is considered of greater public value from a scenic and scientific standpoint than from that of economic development, it was stated.

## Urges Forest Service in Arkansas

In an address entitled "Arkansas Forests and Arkansas' Future," delivered before the General Assembly of the annual Farmers' Week at Fayetteville, Arkansas, on August 6, G. H. Collingwood, Forester for the American Forestry Association, emphasized the extent to which farmers own forest in land in Arkansas, and urged the creation of a State Forest Service. Afterwards he made a similar address before the Rotary Club at Paragould, Arkansas, and visited the lumbering operations of the Crossett Lumber Company at Crossett, and the Malvern Lumber Company at Malvern. In the course of his travels over the State he met leading citizens and discussed with them the forest situation and the need of an Arkansas Forest Service to assure the protection of the privately owned forest lands in the State.



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Excellent location between Jacksonville and Jacksonville Beach, Florida, 12,000 acres, all fenced, well stocked with game, good cattle range and timber value. Price \$8.00 acre for prompt sale.

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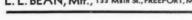
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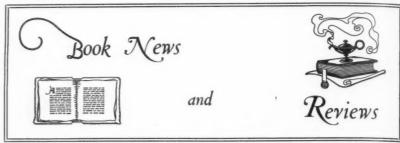
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THE WILDERNESS OF DENALI, by Charles Sheldon, published by Charles Scribner's Sons, New York. 412 pages, illustrated. Price \$6.

The last book written by this great conservationist is in simple narrative style, largely a direct compilation from his Alaskan journals. Here is told the story, day by day, of his life on his last trip into the great wilderness country which surrounds Mt. Mc-Kinley—"Denali"—as the Indians call it, where he went to hunt and study the Dall sheep of Alaska. It is an account which will endow richly the literature of our Northern wild life and its native habitat.

Much of the country he explored was primeval, untraveled by man. A deep student of big game animals, through the hunt—and he always hunted alone no matter how remote or inaccessible the field—some of his most valuable experiences came. In this book he tells thrilling tales of the hunt—when his own preservation seemed almost a miracle—patient stalking for hours in wild, unbroken country. Then the kill—followed by a matter-of-fact statement of conditions he found of great scientific interest and value upon his expert examination of the body. Hundreds of his trophies have been added to the permanent collections of our great museums.

This hunter-naturalist loved and yearned for solitudes. Always keenly sensitive, his awareness to beauty runs through his book like the glint of a golden thread. His word pictures of this magnificent country are unforgettable. Only his great physical strength and endurance made possible the arduous work which has contributed so largely to the understanding and conservation of wild life. And this work, enacted into Federal and State legislation, memorializes Charles Sheldon forever.—L. M. C.

"The State Forests of Pennsylvania," by Joseph S. Illick, State Forester of Pennsylvania. Issued by the Department of Forests and Waters, at Harrisburg.—Pennsylvania's aggregate area of forests, now owned and administered by the State for the benefit of her people, runs up to a total of 1,290,692 acres. This little book completely covers the creation, location, enlargement and handling of this great State Forest area. There is as well much information of interest and practical value for the camper and recreational user of the woods.

"What the Forests Mean to the Future of West Virginia." Report of the West Virginia Commercial Conference, published by the Game, Fish and Forestry Commission, the State College of Agriculture and the State Department of Agriculture at Charleston, West Virginia.—The collection of papers presents a picture of the progress of commercial forestry with emphasis upon conditions now existing in West Virginia.

DEATH VALLEY: THE FACTS, by W. A. Chalfant. Published by the Stanford University Press, Stanford University, California. 155 pages; illustrated. Price \$3.50.

Death Valley, the subject of much prose and poetry, is presented here in a vivid background of authenticated fact. This book holds a mass of data on geographical, historical, meteorological, and climatological aspects of the Death Valley country. But it is presented in such a delightful manner that it challenges the imagination of even the prosaic-minded reader.—E. K.

"Sweet Gum in Maryland," by Fred B. Trenk. Issued by the University of Maryland, State Department of Forestry.—It tells of the characteristics, economic importance, life history, uses, production, and management of sweet gum, one of Maryland's most valuable hardwoods. The appendix contains estimating tables and useful information on estimating and timber selling.

CHRYSANTHEMUM AND ITS CULTURE, by Edward A. White. Published by Orange Judd, New York. 192 pages, illustrated. Price \$2.

Chrysanthemum, flower of Japan—proud, beautiful, golden flower with petals of velvet taffeta. Each blossom a perfect picture, and in its natural setting, a bronze vase before a screen of satin and teak-wood, it gives a beauty that is the wise dignity of ages.

That is the finished product and Mr. White, authority on the culture of this regal blossom, tells us in his book just how to accomplish a perfect chrysanthemum.

A little complex is this book for the amateur gardner, but for the professional it would seem a necessity. It is a complete discussion on all phases of the chrysanthemum and its present-day culture.—P. V. G.

"Deer Damage to Forest Trees in Pennsylvania," by Leroy Frontz. Published by the Forest Research Institute, of the Pennsylvania Department of Forests and Waters, Harrisburg.—Deer feed upon all forest growth, but particularly upon the conifers. Eastern deer show a preference for white pine and pitch pine. They appear partial to the buds, leaves and twigs. This is the first report on a forestry problem which has attracted the attention of State Foresters and game officials, as well as sportsmen, conservationists, and forest landowners.

FLOWERS AND FLOWERING PLANTS—An introduction to the Nature and Work of Flowers and the Classification of Flowering Plants —by Raymond J. Pool, Professor of Botany, University of Nebraska. Published by McGraw-Hill Book Company, Incorporated, New York. Price \$3.50.

To the average forester, taxonomy is the least interesting subject in the entire field of botanical endeavor. This is not because he is uninterested in identifying plants, but because taxonomists have made it next to impossible for anyone but a specialist to familiarize himself with their classification. The old type systematic botanist is concerned primarily with cataloguing plant names; his ambition is to list as many species as possible and he takes especial delight in changing all the names which ordinary mortals have laboriously fixed in their minds. Unfortunately, this type of botanist is not dead yet, but there are signs of his passing.

A newer school, which, let us hope, will eventually supplant the old one, is interested in plants as units of life, and in classifying them he seeks to express natural relationships. In the many forms of plant life is seen a developmental trend from low to higher, more specialized types. This conception opens a fascinating field to the mind that likes to study plant life but rebels at artificial keys and pigeon-hole systems.

Flowers and Flowering Plants is founded upon the evolutionary idea, which it maintains throughout. The author recognizes that botanists are not yet in possession of all the information needed to write a complete story of the origin and development of the plant kingdom, but he justifies the attempt to do this.

A large portion of the book is devoted to a discussion of plant structures. Technical terms are defined and explained in simple language. This discussion paves the way for and is necessary to an understanding of the plant classification which follows. Instead of the usual keys for "running down" plants, the author employs a chart in which the families are arranged in phylogenetic order according to the "Besseyan System," each family being represented by a concise formula indicating its type of structure. Charts of this general character, but modified from time to time, have been in use in the University of Nebraska for 30 years,

having been introduced by Clements in 1900.

The book is recommended to foresters and others who wish to acquire a working knowledge of plant structures and a general understanding of phylogenetic relationships.—

G. A. P.

AMERICAN CIVIC ANNUAL, Vol. II, 1930, edited by Harlean James. Published by the American Civic Association, Washington, D. C. Price \$3.

This is the second volume of collected material on matters of civic interest, which has been prepared by the American Civic Association. Articles on "Washington, the Federal City," on housing conditions, our National Parks, and on roadside improvement will be interesting to many members of The American Forestry Association—

G. H. C.

"American Standards Year Book, 1930."
Published by American Standards Association, New York City.—Discussions of accomplishments of the American Standards Association toward standardizing many of the things in common use.

"Yield, Stand and Volume Tables for Douglas Fir in California," by Francis X. Schumacher, Bulletin 491, University of California, Berkeley.—This bulletin contains tables and charts showing the growth and volume of Douglas fir and various stands on the western coast.

"White Pine Blister Rust Control in Connecticut," by J. E. Riley, Jr. Bulletin 314 of the Connecticut Agricultural Experiment Station, New Haven.—A brief description of white pine blister rust, with maps showing its occurrence in Connecticut and the areas which have been controlled. The bulletin also contains a description of the several currants and gooseberries which serve as intermediate hosts of the disease.

THE TRAVEL DIARY OF AN ANGLER, by Henry van Dyke. Published by the Derry Dale Press, New York; 143 pages; illustrated.

A diary implies a degree of intimacy that is seldom included in anything other than essays or autobiographies. These are really a series of delightful autobiographical essays by the scholarly philosopher and fisherman, Dr. Henry van Dyke. This little book affords one the pleasure of fishing with the author in the historical Jordan, far north in the waters of Norway, in a little river in Japan, among the majestic forests of New Zealand, and in our own incomparable Rockies. One may not be a better fisherman for having read this book, but he will certainly be a more thoughtful individual.—G. H. G.

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#### Dutch Elm Disease Found in Ohio

The Dutch elm disease has been discovered on elm trees in Cleveland and Cincinnati by representatives of the Ohio Experiment Station. The invasion is limited to relatively few trees. No cure is known, but plant pathologists hope that its spread may be prevented by promptly removing and burning all affected trees.

The symptoms of the Dutch elm disease are sudden wilting of the leaves of a few branches, or over the entire tree, followed by yellowing and dropping of the foliage of the affected parts.

## Increase of Sheep and Goats on Forest Land

More sheep and goats, and fewer cattle and horses are finding their feed on the grazing grounds of the National Forests, according to C. F. Rachford, assistant forester in charge of grazing, Forest Service.

The general trend has been toward an increased number of sheep and goats, 1928 showing approximately 7,200 more than 1927 and 1929 showing 259,700 more than 1928. The number of sheep and goat permits show a corresponding increase of 444 for 1929 over the number issued in 1927. There were 17,600 fewer cattle and horses grazed on the National Forests in 1928 than in 1927, and a further decrease of 5,680 in 1929, while the number of permits declined 904 in 1928 and 93 in 1929.

#### Forest Work Camp Project

A project to provide outdoor work during the summer months for young college men has been sponsored by the Connecticut Forest and Park Association. The plan provides for the construction of fire lines, road and trail building and other forest improvement work on the State Forests. The salaries of the men would be financed by contributions. Attendance will be restricted to men of eighteen years of age and older.

## Foreign Diseases Threaten Forests

Virulent diseases introduced from abroad are threatening American forests and international cooperation is needed, Dr. E. P. Meinecke of the Department of Agriculture, told the Inter-American Conference on Agriculture. Forestry and Animal Industry meeting at the Pan-American Union, Washington. D. C., early in September.

Characterizing the chestnut blight which has swept over the Appalachian region as "the greatest forest catastrophe in the world's history," Dr. Meinecke said that another very serious disease had just been discovered-the European larch canker. This most dreaded of European forest diseases, he said, was introduced on nursery stock from Scotland. Despite early and energetic control measures. he said, it is a menace to the extensive American larch forests.

When one of these diseases is introduced, he said, measures of control are expensive and put a continuous load on the forest industries. An effective method of control, he explained, has been found for the white pine blister rust, which, introduced from Siberia, where it lives on a species of pine to which it is harmless, has played havoc with one of the most economically valuable forest crops in the United States.

Study of the life history of this fungus, he said, has shown a weak spot in its life cycle where it can be attacked successfully. The first generation lives exclusively on the white pine. The second generation cannot live on the trees, but only on currants and gooseberries. The third generation returns to the pines again. Thus it can be controlled by eliminating the currants and gooseberries in the forest areas.

Other speakers at the Conference included Secretary of Agriculture Hyde; R. Y. Stuart, Chief Forester of the United States Forest Service: W. D. Cox. forester of the Tropical Plant Research Foundation; and D. M. Mathews of the School of Forestry and Conservation, University of Michiagn.

## California Forestry Students Make **Excellent Record**

F. W. Grover of Berkeley, California, honor student of the Forest School, University of California, headed the list of competitors in the nation-wide Civil Service examination for the position of junior forester in the United States Forest Service. Two other students of the school, Peter Van Huizen of Ukiah, and C. C. Buck, of Oakland, passed third and fourth, respectively, and of the eight men from the school who took this examination, seven were successful. A total of 185 applicants from all parts of the country competed, and seventy-eight, or less than fifty per cent attained a passing mark.



To broaden the scope of its educational work, The American Forestry Association has assembled a fleet of fully equipped trucks with which to tour the country. The Acme Portable Projector is an important part of this equipment.

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## Prizes Offered for Pictures of Living Christmas Trees

To create a greater interest in the planting of evergreen trees and to procure pictures of living Christmas trees, the General Federation of Women's Clubs announces that again this year \$5 will be given for the best six photographs of growing Christmas trees submitted to Mrs. Warder Irwin Higgins, chairman of the Committee on Gardens, 205 West Granite Street, Butte, Montana.

The following living Christmas trees were prize winners in 1929: "Tree of Light" in Riverside Park, New York; municipal Christmas tree at Salem, Oregon; community Christmas tree planted by the Mothers' Club of Barron, Wisconsin; home Christmas tree of Mrs. A. W. Miles, of Livingston, Montana; and the Community Christmas tree planted by the Women's Club of South Deerfield, Massachusetts.

## North Carolina Meeting

The problem of land utilization and the relation of wild life to the forest, featured the 20th annual meeting of The North Carolina Forestry Association at North Wilkesboro, September 9, 10, and 11. Other problems dealt with were forests as a basis of industry and wealth, farming woodlots, forest legislation and taxation. A number offeld demonstrations in sawing lumber, lumber grading, forest thinning and timber scaling were also held.

## Injured Fighters of Forest Fires Are Compensable

Men hired by the State to fight forest fires are entitled to compensation for injuries in so doing, under the workmen's compensation laws of New Hampshire, according to Assistant Attorney General Wadleigh.

The ruling is based on Section 1 of chapter 140 of the Laws of 1929, as follows:

The governor and council, upon petition and hearing, may award compensation for damages to employes of the State receiving personal injuries by accident arising out of and in the course of their employment, caused by the negligence of the State or any of its officers, agents or employes, or by reason of any defect or insufficiency due to its or their negligence in the condition of the ways, works, machinery, equipment, appliances or place of employment, to an amount not exceeding that provided for similar injuries received or suffered under similar circumstances by chapter 178 of the Public Laws.

## Highway to Connect Alaska

In accordance with H. R. 8368, passed by Congress and signed by the President on May 15, there will be appointed a commission of three to cooperate with representatives of the Dominion of Canada to make plans for the construction of a highway to connect the northwestern part of the United States with British Columbia, Yukon territory and Alaska.

## Ready-Made Forests

Some folks just can't wait a few years for little evergreens to grow up. If you are one of these and wish to plant for immediate effect, we can supply you with:

Scotch Pine, 2 to 3 ft., 3 to 4 ft. and 4 to

White Spruce, 2 to 3 ft. and 3 to 4 ft. Norway Spruce, 2 to 3 ft. and 3 to 4 ft. Red Pine, 2 to 3 ft.

American Arborvitæ, 2 to 3 ft. and 3 to 4 ft. American Hemlock, 2 to 3 ft. and 3 to 4 ft.

American Hemlock, 2 to 3 ft. and 3 to 4 ft. All several times transplanted.

Upwards of 20,000 trees of the above to move this fall (except American Arborvitæ, which should be planted in the spring). If you can use 100 trees or more, we will make you very attractive prices.

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If you want to have lovely shade trees about your home—if you want to have a tree-lined street—if you want to increase the value of bere lots by surrounding them with fine shade trees—the Siberian Elm offers a new way. With this remarkable tree you will not have to wait years for results.

You will experience the pleasure of seeing a whip turn into a tree the very first year.

Here is what the U. S. Department of Agriculture says about the Siberian Elm: "It is very hardy and has proved valuable under a greater variety of climatic and soil conditions than any tree yet introduced. Very favorable reports have been received from practically every section of the country."

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We recommend these trees for planting this fall so as to establish their roots in the ground for an early start on next spring's growth. The best time for fall planting is from October 20th to November 20th.

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5 foot Trees
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#### How Tall is a Tree?

It depends on who saw it, and how far away from home, says the Forest Products Laboratory, at Madison, Wisconsin. Stories are current today about trees in the "back reaches of Australia" alleged to exceed 500 feet in height, and reports of trees crowding or exceeding the 400-foot mark crop up regularly in the forestry journals.

To make a really good tree story a true story is often difficult. A member of the laboratory staff who spent a year in Australia not long ago used the opportunity to check up on some of the basis facts. The tallest Australian tree he actually measured was 310 feet, and he satisfied himself that the tallest ever measured with accuracy in that country was a Eucalyptus regnans or "mountain ash" that grew at Colac, Victoria, and was 325 feet high.

Measurements by a well known forester gave 363 feet for the height of a redwood growing in Bull Creek Flat, California. This is the tallest tree in the world on which there is authentic and reliable information. Even 360 feet is a lot of tree; if you can bat a baseball that far you can hit home runs in a number of major league ball parks.

## Parson Simpkin Dies

Rev. Peter A. Simpkin, of Oregon, chaplain of the Hoo-Hoo International, and known for many years as the "Lumberjack Sky Pilot," died early in August at his home in Marshfield, Oregon.

### Florida Area Under Protection Increases

The area under organized forest fire protection in cooperation with the landowners and Federal Government has almost doubled in Florida during the past year, according to the Florida Forest Service. A total acreage of 1,187,963 acres are now receiving organized protection as compared with 670,285 acres for the previous year.

The areas now under protection are broadly scattered over the State. Within these units sixty landowners are cooperating with the Florida Forest Service and the Federal Government to the end that idle acres may be transformed into productive acres. Eighteen forest fire towers have been erected and many miles of telephone line built. On each unit a ranger has a registered fire crew for every 20,000 to 25,000 acres.

## Photographing Birds

How much time and patience it takes to photograph birds is indicated in a bulletin, "The Summer Birds of the Northern Adirondack Mountains," issued by the Roosevelt Wild Life Station, New York State College of Forestry at Syracuse University.



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## Del Norte Coast Project Completed

Giant redwoods and spectacular seacoast scenery are uniquely combined in the splendid new Del Norte Coast State Park, nearly 3,000 acres in extent, and costing more than \$400,000, now preserved in California by the Save-the-Redwoods League and the California State Park Commission.

No trees or undergrowth are to be destroyed in the park, no construction or development, no "hot dog stands," or billboards to mar the landscape will be allowed. The beauty and tranquility of the redwood forest, the matchless vistas of the pacific, will in this area be kept unspoiled for all time. Not the least important feature of this park is the glorious display of rhododendrons and other wild flowers.

The plan of preserving this Del Norte Coast Park, in its present confines, had its nucleus in the Graves Grove, 289 acres, presented to the League in 1925 by Mr. George F. Schwarz of New York, in honor of Colonel Henry Solon Graves, Dean of the Yale Forest School. Lands controlling highway approaches to the grove to the north and south were later acquired and presented to the League by Mr. George O. Knapp, of Santa Barbara, California.

## Would Unite to Save New York State Forests

Groundwork for a new plan for the conservation and utilization of the forests of New York were made recently at a conference at Lake Placid of the committee on conservation of New York State Economic Council.

It was proposed to permit the relaxing of the prohibitions against commercial use of certain parts of the State Forests provided the industrialists submitted to adequate regulation, while from the industrialists came an offer to join with the groups seeking to safeguard the forests against encroachment in framing a plan which would safeguard the public's interest in the woodlands of the

The conservation committee will discuss the framing of such a plan with the hope of having a definite program ready for submission to the next session of the legislature.

#### Showers Cause Desert to Bloom

Flowers have bloomed in abundance in Death Valley, California, this year, the indication being that seeds which have remained dormant in the ground for many years have been affected by heavy rains which have occurred, according to the Department of Agriculture.

Flowering such as that reported by Government botanists in the Death Valley region is said to occur only once in twenty or thirty years, it is stated.

287,700,000 Feet

## National Forest Timber

For Sale

LOCATION AND AMOUNT: All the live timber designated for cutting, and all merchantable dead timber standing or down located on an area embracing about 5,950 acres in Township 22 N., R. 5 W., W. M., South Fork Skokomish River and Frigid Creek watersheds, Olympic National Forest, Washington, estimated to be 264,626,000 feet B. M., more or less, of Douglas fir, western red cedar and western white pine, and 23,074,009 feet B. M., more or less, of western hemiock and other species of timber. exclusive of timber to be taken at the option of the purchaser.

the purchaser.

STUMPAGE PRICES: Lowest rates considered, \$3.85 per M for Douglas fir, western red cedar and western white pine, and \$1.10 per M for western hemlock and other species. For material unmerchantable because of size under the terms of the agreement to be cut and removed at the option of the purchaser \$1.00 per M for Douglas fir, western red cedar and western white pine, and \$50 per M for western hemlock and other species, these rates to apply also to any of all material unmerchantable because of defects if taken and if charged for. A deposit of \$1.5 per M feet B. M. for timber merchantable under the terms of the agreement, in addition to the prices bid for stumpage, will be required.

PEPOSIT: \$28.000 must be deposited with

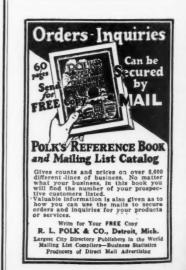
DEPOSIT: \$20,000 must be deposited with each bid to be applied on the purchase price, refunded, or retained in part as liquidated damages, according to conditions of sale.

CONDITIONS: Each hidder must submit with CONDITIONS: Each bidder must submit with his bid a statement of his financial resources, including the funds available for use on this project; and, before final award, the person or company submitting the most acceptable bid will be required to show that he has immediately available, or will have available as needed, sufficient funds to provide the improvements, equipment, and working capital necessary to enable him to meet the requirements of the agreement. The conditions are given in full in the prospectus and sample contract.

FINAL DATE FOR BIDS: Sealed bids will be received by the Regional Forester, Portland, Oregon, up to and not later than 2 p. m. October 30, 1930, and will be opened immediately thereafter.

The right to reject any and all bids is reserved.

Before blds are submitted, full information concerning the character of the timber, conditions of sale, and the submission of bids should be obtained from the Regional Forester, Portland, Oregon, or the Forest Supervisor, Olympia, Washington.



## California Enlarges Fire Prevention Program

Reorganization of the California State Division of Forestry to permit a greatly increased fire prevention program for southern California, has been authorized by Governor C. C. Young.

The important changes are the establishment of a southern California branch of the Division of Forestry, with headquarters at Pasadena, and the organization of a new protection district composed of San Bernardino, Riverside and Orange Counties with a state forest ranger in charge of each

The new southern California branch will be in charge of Deputy State Forester Walter H. Coupe. He will be assisted by Jess A. Graves, formerly of the Los Angeles county forester's office.

The new tri-county protection district will be in charge of State Forest Ranger E. W. Nelander, whose headquarters will be at San Bernardino.

The three counties form a natural fire protection district according to State Forester M. B. Pratt, who explained that they all get their water supply from the San Bernardino mountains.

#### Canadian Sawed Lumber and Timber to Be Admitted Free

Admission free of duty from Canada of all sawed lumber and timber not further manufactured than planed or dressed on one side as provided in section 401 of the Tariff Act of 1930, is directed in a decision by the Commissioner of Customs, F. X. A. Eble, approved by the Secretary of the Treasury, Andrew W. Mellon.

The Department's decision interprets "boards, planks and deals" as covering all forms of sawed lumber and timber of the softwoods on which a duty of \$1 a 1,000 feet is levied by the act.

"Since the passage of the present tariff act the Department has received numerous requests for an interpretation of the terms, "boards, planks, and deals" with special reference to the question whether the terms are to be construed as sufficiently comprehensive to include all sawed lumber and timber," stated Commissioner Eble.

"The Department has given this matter careful consideration and is in receipt of communications from various sources including the Department of Commerce and Agriculture, as to the meaning of the terms quoted, as well as a letter from the tariff Commission submitting a memorandum from the Chief of the Lumber Division of that Commission upon the subject, with the result that the Department finds from the record before it that the terms "boards, planks and deals" have no definite commercial significance.

"The Department, from the information available, is of the opinion that the phrase

"boards, planks and deals" embraces all forms of sawed lumber and timber. A careful reading of the debates on the floor of the Senate shows the intention that this proviso should cover all forms of sawed lumber and timber of the species enumerated in paragraph 401, and that the tariff classification of all lumber and timber imported from Canada should receive equally favorable treatment as that accorded by Canada to such lumber imported into Canada from the United States.

'In view of the foregoing and to give effect to what the Department believes to have been the intent of Congress all sawed lumber and timber provided for in paragraph 401 imported from Canada should be admitted free of duty under the proviso if not further manufactured than planed or dressed on one

#### Buffalo to Alaska

Twenty-three American buffalo have been sent into Alaska from the National Bison Range, Montana. Nineteen were liberated near McCarthy and four are being held at the reindeer experimental station of the United States Biological Survey at Fairbanks.





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## How the National Forests Were Won

(Continued from page 619)

the fighting needed to forestall our enemies all through those years. Fighting was the order of the day. We had to fight to put grazing fees and grazing regulation into effect. We fought against fraudulent mining and agricultural claims. We fought against timber trespassers and water power grabbers. Above all we had to fight politicians.

"The opposition of the servants of the special interests in Congress to the Forest Service," Roosevelt wrote later, "had become strongly developed, and more time appeared to be spent in the yearly attacks upon it during the passage of the appropriation bills than on all other government bureaus put together. Every year the Forest Service had to fight for its life."

If the Forest Service had powerful enemies, it had still more powerful friends, who have prevented to this day any substantial breach of the system. Many elements contributed to the success of the National Forest enterprise. First of all, it was based on eternally sound basic principles of public good, of dedicating natural resources to permanent public welfare. Then, to carry out these principles, the Forest Service built up an efficient, honest, energetic, trained personnel wholly devoted to the public interest and authorized to make important decisions and to act promptly. And then, back of all this, the Forest Service has had the vigilant and generous support of intelligent public opinion, of the press, of many powerful members of Congress, especially from the East and Middle West, and of the organized conservationists

Through fifty years the National Forest

idea has been wrought to success because conservationists were fired with one all-powerful purpose: the public forests must be saved from spoilation, must be kept by the people for the people.

Now a new purpose and a new goal stand out clearly before the forest movement. To that purpose conservationists must dedicate themselves with the same tenacity, courage and vision they gave so freely to the creation of the National Forests. Only a fraction of our forests has been saved by the National Forest movement. Three-fourths of the forests of America are being relentlessly destroyed by the ax. It is the duty of conservationists to save them.

The National Forests were only the first step in a great conservation program that looked to saving all our forests, to say nothing of all other natural resources. When I left the Forest Service in 1910, we already had under active way plans for bringing about the control of destructive exploitation of private forests. The great Conference of Governors called by President Roosevelt in 1908 had proposed such control. Public opinion was ripe for the move.

Public control of forest devastation has been side-tracked and as a result the whole forest movement has been hobbled and hampered. Public control of forest devastation must now be restored as the chief immediate goal of forest policy.

Until public control of the ax of destruction is attained, forest devastation will continue practically unchecked. For the public welfare and the national security, forest devastation must stop.

## NOMINATE YOUR FRIENDS FOR MEMBERSHIP

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American Forests and Forest

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Nominated by

October, 1930.



Each Month Forestry Questions Submitted to the Association Will Be Answered in This Column. If an Immediate Reply is Desired a Self-Addressed, Stamped Envelope Should Accompany Letter.



QUESTION: I want to get statistics on the following: Regions in United States devastated by forest fires or prairie fires; estimated economic loss from these fires; general causes of forest or prairie fires, and life loss .- F. H. M., California.

Answer: All parts of the country are visited by forest fires, but the three regions where fires are worse are in the Southeastern States. the Gulf States and the Pacific Coast States. Practically all of the entire acreage burned during the past several years has been in the Southeastern States. In 1927 the total area reported burned by forest fires was 30,625,460 acres. In 1928 there were 43,931,310 acres burned and recent figures from the Forest Service report that during the calendar year 1929, 46,230,120 acres were burned over causing an estimated damage of \$102,055,400.

More than half of the fires are reported to have been caused by the careless use of matches and lighted tobacco, by brush burning and by purposely set fires. The remainder are caused in the following order: lightning, campfires and railroads. Miscellaneous and unknown causes start about 17 per cent of the fires and the lumber industry about 4 per cent.

No records are available showing the total lives lost during any given year as the result of forest fires, but during the past year fourteen employees of the government were killed while fighting fires on National Forests. Without doubt the total loss far exceeds this.

QUESTION: Why is it possibly harmful to feed newly transplanted deciduous trees or evergreens with the commercial tree foods?-C. E. M., New York.

Answer: This seems to be largely a question of degree of application. Concentrated fertilizers applied in large quantities to the soil may kill the young roots, but a small amount of fertilizer well mixed with the soil is generally considered desirable. Small evergreens used for foundation plantings are given only enough nutrients to keep them in good health, but if rapid growth is desired they will respond to fertilizers in much the same way as will deciduous trees.

QUESTION: Last spring I cleaned away from the walls of a well three bushels of fine elm roots. Since then the water has been reddish in color. Can you suggest something to do to save the trees and the well?-E. B. S., Rhode Island.

Answer: Fairly permanent results may be obtained if the tree is heavily root pruned for a distance of eight or ten feet back from the well. Dig a semicircular trench between the well and the tree so as to cut off all roots pointing toward the well, and carefully clean the well. A plumber's blowtorch is suggested as a means of searing the root ends within the well

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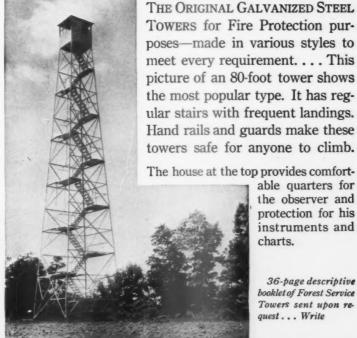
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# ADVERTISERS OCTOBER, 1930

	Pag
Aermotor Company	67
Aiken, Geo. D	66
Ballard & Co., J. O	66
Bean, L. L	66
Benner & Company	66
Bessemer Galvanizing Works	67
Blue Ridge Park Nurseries, Inc	67
Bristol, H. R	67
	67
Brown Company, The	67
Buechly, E. M	07.
Central Maine Forest Nursery	67
Colorado School of Forestry3rd	
Colorado School of Forestry	67
Coolidge, P. T	674
Darton, W. B	672
Darton, W. B.	07.
Fechheimer Bros. Company, The	673
	670
Ferndale Nursery	671
Fleu, Conyers B., Jr	
Forest Service, U. S	672
Franklin Forestry Company	671
	691
Glen Brothers, Inc	673
Hardy Evergreens Gardens	671
	Cov.
narvaru rotest	671
Holden Patent Book Cover Company	665
Ford Projector Com (Asmo Division)	668
Int'l Projector Corp. (Acme Division)	003
Jones Nurserics, J. F	670
Jones Nurserics, J. F	670
Jones Nursery, E. W	070
Keene Forestry Associates	671
Keene Forestry Associates	011
Kelsey Nursery Service	004
Kelsey Nursery Service	670
and a second sec	665
	671
Lee & Company, George S	667
Living Tree Guild, The	669
Loganbrae Kennels	672
Lowden, R. D	669
Morris Nursery Company	671
NT '11 NT	671
	671
Nat'l Lumber Mfrs. Association 4th	LOV.
N. Y. State College of Forestry 3rd C	ov.
North-Eastern Forestry Company, The	671
Oregon School of Forestry 3rd C	OV
	ov.
Piedmont Forestry Company	671
	668
Polk & Co., R. L	672
Prentiss & Carlisle Co., Inc	
Prentiss & Carrisie Co., Inc	0/4
Richards, Edward C. M	674
Richards, Edward C. M	014
Schumacher, F. W	571
	574
	672
Smith-Gray	
Stoeger, Inc., A. F	666
Tomoll's Aquatic Forms	566
Terrell's Aquatic Farms	000
Univ. of Idaho School of Forestry . 3rd C	OV
University of Maine 3rd C	
Utica-Duxbak Corporation	063
Western Cartridge Company 6	6.2
Western Maine Forest Nursery	
Weyerhaeuser Sales Company	61
Wisconsin Aquatic Nurseries 6	661
Wisconsin Aquatic Nurseries	661
Wisconsin Aquatic Nurseries 6	66 66 670

## "WHO'S WHO" AMONG THE AUTHORS IN THIS ISSUE

"GIFFORD PINCHOT," said Theodore Roosevelt, "is the man to whom the nation owes most for what has been accomplished as regards the preservation of the natural resources of our country."

He was graduated from Yale in 1889 and studied forestry in France, Germany, Switzerland and Aus-



Gifford Pinchot

tria. Became first Chief Forester of the United States Forest Service, and served as Commissioner of Forestry in Pennsylvania from 1920 to 1923, when he was elected governor of that State.

Josie Platt Parler writes that "I have long been identified with local, county and state federated club work, and have for a number of years contributed editorially to the

press of South Carolina." The wife of a doctor and planter, her life has been spent on plantations in southern South Carolina, she says.



Josie P. Parler

WILL C. BARNES recently resigned as secretary of the National Geographic Board to complete a book dealing with the history of

Arizona. Author, soldier and stockman, he served for more than twenty years with the United States Forest Service, as assistant forester in charge of range management.

CHARLES NEWTON ELLIOTT is assistant superintendent of the forest parks of Georgia, under the Georgia Forest Service A native of Georgia, he attended the School of For-

estry at the University of Georgia before entering the United States Forest Service in Montana, where he served for several years.

H. M. WIGHT, assistant professor of Forest Zoology, at the University of Michigan, says he was "reared on a farm in



Charles N. Elliott

Maine, was graduated from Bates College, served as specialist in economic zoology at the Oregon State College, where he taught taxidermy and zoological collecting, fur farming and fish and game propagation, and was a member of the Oregon State College Experiment Station. Serving with the Pine Tree Division of the A. E. F. he received the Distinguished Service Cross for bravery in the Argonne.

THEODORE H. SCHEFFER, associated with the

Bureau of Biological Survey, at Puyallup, Washington, writes that he was "born of Revolutionary ancestry in the hills of western Pennsylvania, nurtured on the prairies of Kansas, was educated at the University, and that his life work has



T. H. Scheffer

doctor and planter, her been in the public schools, as instructor at the life has been spent on Kansas State College and in biological lines.

ALMA CHESNUT, of Washington, D. C., is a weil-known writer of scientific articles, and was formerly a member of the staff of AMERICAN FORESTS and FOREST LIFE. She began her career in Baltimore, Maryland,

> as a feature writer for the Baltimore American. Today she is writing for newspaper syndicates.



Alma Chesnut

SMITH RILEY is one of the pioneers who blazed the way for the Forest Service as organized at present. He served as a ranger and as District Forester in charge of

the National Forests in the Central Rocky Mountain Region with headquarters at Denver. In 1920 he resigned because of ill health, and since then has been associated with the administration of federal and state laws dealing with wild animals.

FLORENCE THOMAS lives on a ranch near Mt. Bullion, California, and JAMES B. BEALS is a Forest Ranger on the Rio Grande National Forest, in Colorado.

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HUGH POTTER BAKER, Dean

Timber Exploitation

ORESTS, like other forms of property, can and should contribute their fair share to the support of government.

Forest property, like any other, cannot survive taxation disproportionate to its producing capacity. Excessive annual taxation forces premature liquidation of forest investment, and often leads to abandonment of the land.

Forests too often are taxed in proportion to the fiscal necessities or ambitions of local government -and too rarely in accord with the revenue which the property is able to return.



(2) A taxation proportionate to the real forest value permits reforestation

Trees are a crop, which may be harvested and converted into money but once during their lifetime. This principle applies whether the trees compose a mature virgin forest, to be held in reserve for a period of years as the raw material supply of manufacturing plants, or whether they constitute a young, growing stand requiring perhaps several decades to reach merchantable size.

The imposition of an annual ad valorem tax during the long interval before harvesting creates a capital carrying-charge which often exceeds the increase in the value of the

Some forest states of recent years have made commendable progress in remedial forest tax legislation, providing for an annual property tax on the bare land within the limits of its intrinsic investment value as such, and for a yield tax on the timber crop collectible only at the time of cutting-when there is cash with which to pay it. Unfortunately, with one partial exception, effort has been concentrated on cut-over land and immature forest. No systematic attempt has yet been made in any state to relieve our remaining virgin timber reserves from the burden of the annual property tax which is fast forcing it into premature cutting. All virgin timber should properly be cut eventually. But it is important that as much as possible be kept in reserve as a source of supply pending the maturity of the new growing forests.

All standing timber should be regarded by the tax collector as a crop. It should be treated as taxable property only when it enters into commerce. Only the land itselfas in other crop-bearing lands-should be subjected to annual property taxation.

## National Lumber Manufacturers Association

Transportation Bldg.

Washington, D. C.

## Forestry Program of the National Lumber Manufacturers Association Summarized

1. Intensive campaign to encourage every commercial forest owner to study carefully the economic tim-ber-growing possibilities of his prop-

2. Encouragement to forest owners to study the economic advantages of selective logging and sustained yield methods and to apply them

yield methods and to apply them wherever practicable.

3. Expert advice to individual forest-land owners and to regional lumber manufacturers' associations to stimulate and direct forest economic studies of individual forest-land properties.

4. Acceleration of cooperative activities under the Clarke-MoNary.

4. Acceleration of cooperative activities under the Clarke-McNary and McSweeney-McNary Federal acts to eliminate methods of oppressive taxation, to extend effective protection against fires, to improve standards of wood utilization and to advance sound economic practice in forest conservation and replacement.

replacement.

5. Development of plans for stabilization of the lumber industry and the orderly control of produc-

6. Coordination of sales of Federal

6. Coordination of sales of Federal and State Forest timber with the activities of owners of adjacent private forest property.
7. Larger appropriations for the protection of National Forests.
8. Expansion of Federal State and, Municipal forest ownership.
9. Permanent reproductive administration of the Indian Reservation forests.
10. Education of the public to a more intelligent utilization of lumber and other forest products, and encouragement of public and private research in the utilization of logging and sawmill by-products and diversification of wood uses.

(For copy of the full Program, write the National Lumber Manufacturers Association, Transportation Building, Washington, D. C.)

